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Study of Paper Industry To Be Made By NRA

While Final Details Have Not Yet Been Completed, It Is Estimated that the Study Will Require Several Months and That Fifty-four Men Will Be Employed on the Job—Unofficially It Is Understood That the Proposed Survey Will Take Up Conditions in the Paper Industry Before, During and Since the Codes

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 25, 1935—While final details have not yet been arranged for the study that is to be made of the paper industry by NRA, it is estimated that the study will take several months and it is reported that 54 men will be employed on the job.

In addition to many men already employed at NRA it is possible that the organization may have to bring some additional paper experts into the picture before the survey is completed. It is expected that some field work will have to be done before the work is finished.

E. C. Popp, who will conduct the survey as announced exclusively in the PAPER TRADE JOURNAL last week, lives at Holyoke, Mass. He attended the University of Pennsylvania, later enlisting in the army. Following the World War he finished his scholastic training at William & Mary College, majoring in physics.

From 1930-1932 Mr. Popp was director of aeronautics of William & Mary College, and later research director of the Aero Pickup Service Corporation, of Boston. Since February of this year he has been connected with the chemical unit of the Research and Planning Division of NRA.

It is understood unofficially that the contemplated survey will take up conditions in the paper industry before the codes became effective, conditions when they were in effect, and conditions at present.

Kraft Co. To Complete Port Mellon Mill

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., July 20, 1935—The way has been opened whereby Vancouver Kraft Company, Ltd., may complete construction of its plant at Port Mellon, B. C. Authority to borrow $400,000 from the Columbia River Paper Company was granted at an adjourned meeting of the bondholders held here. This money is to be used, it was stated in an extraordinary resolution passed, for completion of this plant, to place it in operation and to supply working capital, as well as to pay all obligations having priority over the rights of the bondholders.

It was further provided in the passage of a second extraordinary resolution that in view of the fact the company is in default under the trust deed securing the first mortgage 6½ per cent sinking fund gold bonds and may continue in default until and during the term of the five-year lease authorized by the extraordinary resolution, the trustee under the trust deed was instructed to waive all defaults of the company under the trust deed but that no waiver shall release the company from its ultimate obligation to pay interest upon the bonds.

Owing to lack of a sufficient number of bonds being represented at the meeting, other resolutions could not be acted upon.

Union Mill Paper Mfg. Co. Enlarges Plant

[FROM OUR REGULAR CORRESPONDENT]

NEW HOPE, July 22, 1935—Work has been started on the new addition at the plant of the Union Mills Paper Manufacturing Company on the south side of town. Roy Large, a local contractor, is in charge of the work.

The new construction will join the two wings of the upper end of the plant, providing several thousand additional square feet of floor space on the ground floor with new offices on the second floor. It is estimated the construction will amount to about $20,000.

This firm manufactures a type of insulating papers for telephone and electric cables as well as heavy paper for artificial leathers.

The plant is under the same ownership as the Universal Paper Bag Company on Bridge street, the principal owners being William White and son, Trenton and Princeton. Ralph Simonton is the local superintendent.

Bastrop Mill Starts Full Operation

BASTROP, La., July 22, 1935—Full operation of the Bastrop paper mill of the Southern Kraft corporation started last week. A crew of several hundred men have been hard at work cleaning up the mill, making minor repairs and putting it in shape for running.

Approximately five hundred people have been employed at the Bastrop mill, most of whom are former employees who have been brought back to their old jobs from the Louisiana mill and other mills of the Southern Kraft corporation.

Chicago Paper Market Displaying Strength

Steadiness Generally Prevails, Although Demand for Various Standard Grades of Paper Is Seasonally Quiet—Fine Paper Section Experiences Little Change—Outlook for Kraft Paper Division Promising—Waste Paper Request Restricted

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., July 22, 1935—The Chicago paper market is performing in a way entirely satisfactory to local jobbers and sales representatives. While demand has quieted down the markets remain firm and no single division gives any indication of receding from this situation. Efforts on the part of certain buyers to distribute sufficient rumours to result in some breaks have proven unsuccessful and have almost subsided. In some instances buyers of paper are actually looking for higher prices, a combination of circumstances auguring well for Fall.

The kraft market was expected to be further firmed up following discussions held in Chicago during the week. Demand here is light and not expected to improve materially for another month. Bonds and ledgers had a fairly good week, although inquiries have dwindled as the hot weather comes along. Books and covers registered little change. Paperboard reported no change during the week. Newsprint interests found some satisfaction in increased advertising lineage reports but were still dissatisfied with the price structure.

Paper Salesmen's Activities

The Midwest Division of the Salesmen's Association of the Paper Industry has decided to hold its regular weekly meetings throughout the entire summer period. Heretofore the group has disbanded in the summer to convene again after Labor Day. The market situation and efforts to carry on an effective and purposeful model of NRA principles without governmental control are explained as two factors necessitating weekly comparison of notes and discussion of current problems. R. C. Johnson is the vice president of the division.

Steaming ahead in an effort to crack all existing records, Ben Babbitt, hard working golf chairman of the Salesmen's Association of the Paper Industry, Midwest Division, had 65 members and guests at the third of the monthly golf outings held at the Bob-O-Link Golf Club on Friday, July 19. Fifty-eight of the 65 toured the golf course and most of them were on hand for both lunch and dinner. The next event will be held on August 16 at the Knollwood Country Club.

New Twine Rates Proposed

The paper industry, and particularly those divisions dealing in supplies, such as twine, etc., will be interested in the docketed proposal of the Southern Freight Association for lower rates on manila and sisal rope and twine from New Orleans to Ohio River crossings, St. Louis and points in Central Freight, Illinois Freight and freight and western trunk line territories. The proposed rates based on straight or mixed carloads of 30,000 pounds minimum follow: Cairo, 49; Chicago, 51; Cincinnati, 51; Columbus, 55; Council Bluffs, 83; Decatur, 51; Des Moines, 75; Dubuque, 57; Duluth, 86½; Kansass City, 80; Louisville, 49; Milwaukee, 53; Minneapolis, 80; Omaha, 83 and St. Louis, 51.

Summer Specialties Buoyant

Paper firms selling paper napkins, paper plates and other camp and outing accessories are finding the season 1935 an exceedingly profitable one. Suppliers to the vacation trade will be interested to know that the *Chicago Daily News* Travel Bureau reports inquiries on resort and travel information as 61 per cent over last year and road information 30.7 per cent above last year's figures. The *Chicago Tribune*, also maintaining a comprehensive travel service, figures that traffic in Yellowstone Park, for example, is around 50 per cent ahead of 1934. The tremendous amount of paper consumed by the vacation industry will thus be greatly increased, in certain lines, because of the popularity of vacations, hikes and picnics during 1935.

News of the Trade

T. H. Mittendorf, director of sales for the Mid-States Gummed Paper Company, Chicago, sailed the first of the month on the *Europa* for an extended tour of European countries. Mr. Mittendorf will make the trip a combined business and pleasure journey and expects to stay abroad until on or shortly after September 1.

Local printers and other buyers of paper are showing a keen interest in the new split color sheet perfected by the Rex Paper Company, of Kalamazoo, which makes possible the coating of one half of a sheet in one color and the other half in white. The process is reported to make possible a material reduction in expense. A graphic demonstration of the process has been mailed to a large number of buyers in Chicago and downstate Illinois.

Hammermill agents and representatives in Chicago have their eye on the annual agents meeting of the Hammermill Paper Company to be held at Erie on August 22 and 23. The advisory committee, which is represented in Chicago by well known executive personnel, will convene one day prior to the regular sessions in order to work out the details of the Hammermill merchandising campaign which is expected to be a big feature of the Fall program. Golf will provide the major diversion aside from the business sessions.

The Kraft Paper Association held an important meeting at the Drake Hotel in Chicago on Wednesday morning, July 17. Called by S. M. Hudson, secretary, the session drew kraft paper executives from a wide territory, all deeply interested in maintaining the balance now prevailing in the kraft paper market.

Estate of Rudolph Pagenstecher

Rudolf Pagenstecher, president of the Manufacturers Paper Company, left a gross estate of $254,116, reduced by debts and expenses to a net estate of $198,367, when he died on January 10, an appraisal filed with the State Tax Commission disclosed.

Securities accounted for the bulk of the estate, reaching $209,505. The securities included 518 shares of the Keith Paper Company, 3,000 shares of the International Paper and Power Company, of which Mr. Pagenstecher was a director, and 915 shares of the Manufacturers Paper Company. Cash totaled $3,228 and miscellaneouss assets accounted for $41,383 of the estate.

Miss Bertha Pagenstecher, a sister, living at the Hotel Sulgrave, receives all personal effects and a life interest in the entire estate. Four nephews share in the remainder of the life estate.

Northern Ontario Pulpwood Cut Reduced

Will Be Considerably Less Than Last Year, Due to Prolonged Workers' Strike—Approximately 100,000 Cords of Wood Remain Unharvested—U. S. Orders for Sap Peeled Wood Can't Be Filled—Manitoba Paper Co. Reopens Newsprint Plant at Pine Falls

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., July 22, 1935—The amount of pulpwood cut in Northern Ontario, which, at the beginning of the season, promised to be considerably larger than a year ago, will, as a result of the strike of the pulpwood workers, be considerably less. Much loss has been occasioned not only to the workers themselves, but to the various operators who have found it impossible to complete their contracts before the peeling season ends, which is early in August. After August 5, the sap stops running and peeling becomes impossible. The Hon. M. F. Hepburn, Premier of Ontario, said the Government did everything possible to get the men to work—timber dues were reduced, the ban on exports of pulpwood lifted and assistance given to operators in finding a market. This was all undertaken with a view to giving increased employment to hundreds of men who were idle. The Premier added, "Now these strikers have blocked all our efforts, and it has all been brought about largely through the work of a few agitators."

As a result of the strike of two thousand five hundred men in the Thunder Bay district and hinterland, about one hundred thousand cords of wood which, it was expected, would be cut during the peeling season, remains unharvested. The consequence is that orders placed for sap peeled wood by large paper making companies in the United States can not be filled, as it will—as already pointed out—be impossible to peel off the bark before the coming of another growing season next spring.

Spruce Falls Report

The annual report of the Spruce Falls Pulp and Paper Company, Kapuskasing, Ont., shows that the net operating income of the company increased to $354,775 in the fiscal year ended in April last. Loss for the year amounted to $255,050, however, after providing bond interest of $586,667 and taxes of $23,158. Net sales of all products in the latest year aggregated $4,806,440, contrasting with a total of $4,366,506 the year before. The company retired $1,000,000 par value of first mortgage bonds, President F. J. Sensenbrenner points out in his report to the shareholders. The complete working capital in 1935 stands at $767,869 as compared with $479,030 in 1934. Advances on season's wood operations total $930,384 as compared with $838,552 the year before. First mortgage bonds and coupons matured and outstanding aggregate $135,950 and amount owing the company's bankers has risen from $1,052,358 to $1,608,655.

Pine Falls Mill Reopens

The newsprint plant of the Manitoba Paper Company, located at Pine Falls, Man., which was closed for more than three years, re-opened recently and is employing 200 men. A party of distinguished gentlemen from Winnipeg, including the Hon. W. J. Tupper, Lt.-Governor of the Province, went up by special train to Pine Falls and witnessed the inaugural ceremonies.

News of the Industry

The pulp and paper mills of Fort William and Port Arthur are seeking lower power rates. Recently a conference was held in Toronto when representatives from Fort William and Port Arthur met members of the Ontario Hydro-Electric Power Commission. The idea behind the Lakehead proposal was to increase production in local mills and absorb more workers in employment, but there was a difference of opinion expressed and a further conference will be held.

E. N. Hunter, formerly control engineer of the Great Lakes Paper Company, Fort William, Ont., has been promoted to the position of superintendent of the sulphite pulp department. He fills the post left vacant by the death of the late Moses J. Ashley. Mr. Hunter has been associated with the Great Lakes company for the last two years. J. Rocke has been appointed assistant sulphite superintendent, and has been with the Great Lakes company ever since it started operations.

Douglas B. Chant, secretary-engineer of the Ontario Pulp and Paper Makers Safety Association, will, it is announced, shortly become a benedict. His marriage to Miss Kathleen M. MacMillan, daughter of Mr. and Mrs. Hugh MacMillan, of Dundalk, Ont., will take place in St. Andrews Church, Swinton Park, Ont., on August 3.

C. W. Cox, Mayor of Port Arthur, who is a prominent pulpwood operator, said a strong protest had been sent to the Provincial Government against pulpwood being stored in the reservoir in Port Arthur. In order to make Current River an attractive place, Port Arthur would have to get rid of the pulpwood that lies in the storage basin.

The Mercury Paper Company, Ltd., Liverpool, N. S. reports gross profits of $652,503 for 1934 as compared with $881,025 for 1933.

A 5 per cent wage increase retroactive to June first has gone into effect in the plants of the Beaver Company and the Beaver Woodfibre Company, Thorold, Ont. A 7½ per cent increase was granted one year ago.

War Dept. Wants Waterproof Paper

The Philadelphia Quartermaster Depot, 21st and Johnston streets, Philadelphia, Pa., has written the Technical Association as follows:

"This depot will appreciate receiving from your association information and samples regarding the various types and qualities of waterproof paper (flat and crinkled) available for use in packing clothing and other items in bales and boxes.

"The object of this inquiry is to obtain a suitable packing paper that will not stain the contents of the packages when in contact with naphthaline at temperatures above 80 degrees F., that it be waterproof and that the strength be sufficient to stand rough handling, particularly with reference to lining bales.

"It has been found that the asphaltum waterproof paper now in use causes considerable damage to the contents when in contact with naphthaline which it is desired be remedied by using a paper that will not cause this condition.

"Your cooperation in furnishing the desired information and samples at your earliest convenience will be appreciated."

Boston Paper Market Conditions Favorable

Demand for Various Grades of Fine Paper Satisfactory for Time of Year—Wrapping Paper Division Holding Up Surprisingly Well—Total Volume of Paper Business Running Ahead of Corresponding Period Last Year—Paper Stock Somewhat Steadier

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 22, 1935—The volume of business transacted by Boston paper merchants for the week and for July so far is estimated as larger than that for the corresponding periods in 1934, although quieter than previous months this year on account of seasonal conditions. Fine paper has been fairly active for the time of year.

The demand for wrapping paper held up surprisingly well for the season. At one house, in fact, it was stated that business was good. With moderate-priced shoes showing a better pickup in demand than usual, manufacturers of shoe cartons are obtaining more orders, with a consequent call for box board. This commodity in general is fairly active, both in sales and inquiries.

Prices of all grades of paper stock remained firm and unchanged. The market for old papers, mixed papers and old newspapers was very fair. Books and magazines were a little slow. Bagging was active. New domestic rags moved in fair volume. Under old domestic rags, roofing stock continued in demand. There was not much activity in foreign rags, with prices high.

The twine market remained quiet.

Great Northern Staff Changes

Albin R. Caspar has been appointed acting manager for the Great Northern Paper Company in its New York office. Mr. Caspar has been in the Boston office of the Great Northern Paper Company for seven years as assistant manager of manufacturing. While in Boston, he lived at 161 Dickerman road, Newton Center.

Mr. Caspar, who is thirty-nine years old, has been with the company since graduation from Bowdoin College fifteen years ago. He started as a worker in the mills, becoming ground work foreman after about three years. Before coming to Boston, he was night superintendent in the mills of the company at East Millinocket, Me.

News of the Trade

A luncheon meeting of the Fine Paper Division of the New England Paper Merchants Association is to be held at the Boston Chamber of Commerce Tuesday.

Leon M. Poore, director of sales for John Carter Company, Inc., passed last week at Nantucket, Mass., accompanied by Mrs. Poore.

John A. Norton, president of F. E. Norton & Sons, Inc., Henniker, N. H., called on the trade last week.

Mrs. Kathryn F. Ellis, wife of Charles L. Ellis, president of the Downingtown Paper Company, Downingtown, Pa., died July 13. The funeral was held from the residence of her sister, Mrs. William A. Gavon, 89 Westchester road, Jamaica Plain, July 17. Mr. Ellis was formerly with Bird & Son, Inc., East Walpole, Mass., later representing the company in Canada. Afterwards, he became associated with the Downingtown company.

Miss Harriet Tilden Bates, for more than fifty years an employee of Storrs & Bement Company, died July 16 in Symmes Arlington Hospital. Miss Bates, who lived at 17 Gibbons street, Somerville, Mass., was seventy-seven years old. She had done much social work at the Marine Hospital, Chelsea, Mass., and in other institutions devoted to the welfare of seamen. The funeral was held July 18 at 28 College avenue, Somerville.

Indianapolis Demand Continues Steady

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., July 22, 1935—In spite of a heat wave, the worst of the year, the paper situation in this territory continues steady and manufacturers and jobbers are fairly well satisfied with volume. Thus far the abrogation of NRA codes has had little effect on prices and there are some who argue that there will be no drastic aftermath. Others are inclined to the belief that little by little the trade will return to the old price basis of securing business.

Right now sales forces for the fine paper field are a trifle optimistic. Business in these lines has shown some improvement this month over June and the change was as welcome as it was unexpected. Prices in the fine paper field are holding firm. Books and covers are moving well for this season. Quite a bit of direct by mail advertising is in prospect and the volume is certain to increase as fall approaches, particularly if there is an early fall. The spring advertising business was hit because there was no spring.

Unsettled conditions continue to feature the newsprint situation here in spite of efforts to steady the market. Demand is fair at this season, better than it was during the same period a year ago. Reports from mills received here indicate there are no large mill stocks of print paper and the local jobbers certainly have their inventories at a low point.

The coarse paper market is described as good here. There is an active demand for most kraft lines. Wrapping paper and bags are moving nicely for this season. The paper board demand is somewhat quiet just now, but there is a steady undertone, the trade states, that augurs well for the early fall.

Box demand, while not as active as it was during the late winter, has shown some signs of life during the last week. The trade is expecting a good demand a little later from the automobile accessory business and thus far prices are being held firmly. Factory stocks are not large and any consumer demand will have an immediate effect on production.

Summer specialties, as might be expected in view of the hot weather, are moving nicely. Prices are firm.

Forbes Paper Co. Leases Building

The Charles G. Edwards Company announces the sale of the property at 362-364 West Broadway, 45.3 by 62, for the Mercantile Real Estate Company, William G. Broadway president, to the Julson Realty Company, Inc., Nelson H. Berger secretary-treasurer. Breed, Abbott & Morgan represented the seller and Barshay, Frankel & Rothstein represented the purchasers. The six-story building is to be entirely occupied after improvement by the Forbes Paper Company, in business for about thirty-five years. The property is assessed at $57,000.

Canadian-Japanese Trade War Threatened

British Columbia Pulp and Paper Interests and Allied Lumber Industry Perturbed Over Possible Loss of Market—Government of Japan Imposes 50 Per Cent Surtax on Forest Products As Protest Against Dumping Measure Against Nipponese Goods

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 22, 1935—Pulp and paper interests in British Columbia, as well as those of the allied lumber industry, are greatly perturbed over the possible loss of the Japanese market for forest products, through the threatened trade war between Japan and Canada. The Japanese government has imposed a 50 per cent surtax on forest products and wheat from Canada, as a protest against the dumping clauses against Japanese goods, consequent on the depreciation of Japanese currency. Japan had been counted one of the best customers of British Columbia timber trades, buying annually about $6,000,000 worth of forest products, $2,000,000 of which was represented by wood pulp and paper. The surtax is expected to cut a deep furrow into this business. Japan not only bought large quantities of lumber and logs from B. C., but absorbed a considerable volume of pulp of a quality not readily disposed of in other markets.

Just what the surtax will mean to British Columbia in dollars is still a matter of conjecture, but there is no doubt that the province will suffer far more than any other section of Canada. More than half the Dominion's total export to Japan is made up of British Columbia products. Lead and zinc figure prominently among British Columbia's sales to Japan, but these are not subject to the new surtax.

The balance of trade between Canada and Japan is heavily in Canada's favor. In the calendar year 1934 exports to Japan had a total value of $16,475,829 while imports from that country were valued at $4,424,721, the balance in favor of Canada being $12,051,108.

Japan's object is to balance the trade, and what she asks is that for customs purposes, her currency be valued not at par as is now done, but at the depreciated rate. At par the yen is 49 cents; depreciated, it is 28 cents. Valuation for customs is on the basis of par. Then a dumping duty is added.

Chiefly as a result of the increased value of silver, the Chinese market for British Columbia and other goods has virtually collapsed, so that the Orient, which has hitherto been regarded as the most promising field for Canadian exports, has been virtually eliminated by the events of the last few months.

The federal authorities are not so much concerned about the particular demands of British Columbia as they are in preserving commercial peace in Canada's wide international relations. Canada, in short, is not prepared to abolish the dumping duties at the behest of Japan, as that would involve the removal of dumping duties against a number of European countries, including Great Britain.

It is certain that if Japan refuses to accept the offer that has been before the Government for at least two weeks, an offer which this Government considers exceedingly generous, and if Japan insists upon a complete abandonment of the dumping duty protection against depreciated currencies then there will be a serious diminution in this trans-Pacific trade, if not a trade war. Some officials insist, though, that a trade war is highly improbable, that most of the natural products now purchased by Japan from this country are indispensable and they are unlikely to be bought elsewhere.

At the time of writing it appears likely that the discussions between Canada and Japan will end in a deadlock.

Mersey Paper Co. Profits

The statement of the Mersey Paper Company of Liverpool, N. S., for the calendar year 1934 shows gross profits of $652,503 as compared with $881,025 in the previous year and $799,963 two years previous. After paying bond and other interest charges of $397,042 the balance of $255,461 was credited to depreciation and depletion reserve which now stands at $2,022,126.

The balance sheet shows total assets of $14,866,781 as compared with $14,598,381 in 1933. Cash is up $42,000 at $46,811, receivables down to $696,767 from $817,146 and inventories up at $890,929 from $695,714, bringing total current assets up to $1,634,507 from $1,517,798 in 1933. Fixed assets are up about $136,000 at $13,047,152.

Pacific Mills Earnings

From Vancouver it is announced that the report of Pacific Mills, Ltd., for the year ended April 30 last, shows that net profit for the year, after all charges for depreciation, depletion, bond interest and income taxes, was up at $210,454 from $182,808 in the preceding period.

Regular dividends amounting to $119,934 on the preference shares were paid, leaving a balance of net profit accrued to the ordinary shares of $90,520. The net increase in earned surplus for the year after absorbing surplus charges aggregating $41,801, was $48,719, bringing earned surplus as at April 30, 1935, to $6,390,987.

During the year under review the company in addition to redeeming $200,000 in first mortgage serial bonds, purchased $37,000 of first mortgage and subordinated mortgage bonds, thereby reducing total bonded indebtedness by $237,000 to $2,537,200. The further retirement of all the first mortgage bonds, which is announced to take place on August 1, will reduce total bonded debt to $1,434,700.

The balance sheet as at April 30, 1935, reflects a strong position. Current assets amounted to $3,498,322 and current liabilities $398,969 (not including the first mortgage 6 per cent serial gold bonds called for redemption). This indicates net working capital of $3,099,354, as compared with $2,983,025 a year previously.

In submitting the report President Martin calls attention to the fact that while there has been an increase of approximately 10 per cent in the company's newsprint paper production over the previous year to meet overseas demand, prices are still inadequate.

New Paper Pulp in British Guiana

From Georgetown, British Guiana, it is announced that a new source of high-grade paper pulp has been developed in the British Guiana jungle.

An economical process of bleaching Wallaba timber, B. R. Wood, conservator of forests, asserts, renders the wood suitable for use in papermaking.

For years British Guiana's Imperial Institute had sought the secret of making Wallaba useful, though the announcement said it was a private concern that finally perfected the new method.

It brought hope of a substantial industry for the colony. Large areas of Wallaba lie a short distance from the coast, easily accessible.

Philadelphia Paper Market Continues Listless

Seasonal Dullness In Practically All Standard Grades of Paper Generally Attributed to Torrid Weather—Inventory Period Also a Factor—Demand for Paper Specialties Remains Fairly Persistent—Outlook for Paper Stock More Promising

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 22, 1935—By and large the history of the summer business thus far in the paper trade is one of constant seasonal dullness, due in part to the torrid heat wave that has swept this city together with inventory period. But the paper merchants for the most part feel very cheerful over what is to come with the advent of the fall season. Specialty lines have been moving to a greater degree than standard lines, although it is just day to day business.

In the waste paper market, somnolence still prevails. The packers are hopeful of increased prices, contending that at present market prices there is no percentage of profit. However, there is a general feeling that this branch of the business is due for some really good business in the not too distant future.

Association Activities

The Philadelphia Paper and Cordage Association, Inc., is now holding round table meetings every Friday in the English Room at Strawbridge & Clothier's. These gatherings are very well attended, and President Harry S. Platt, of the Denney Tag Company, states that the committees are busy planning a drive for new members in the fall, when they will again resume their monthly meetings at the Adelphia Hotel. E. K. Lay is actively engaged in formulating programs for these meetings, and promises something very attractive and unusual in the way of speakers and entertainment.

New Plant for Wilmington

Mayor Walter W. Bacon of Wilmington, Del., has written to the Cleveland Container Company, extending them a welcome following announcement made during the week by the Chamber of Commerce that the company will locate a new plant in Wilmington. Mayor Bacon writes Willard F. Walker, president of the company in Cleveland, as follows:

"It is my understanding that your firm has definitely decided to locate a plant in Wilmington. As chief executive of this city, I take great pleasure in extending a most cordial welcome to your organization. Wilmington's geographical location, modern and efficient transportation facilities, and other conveniences should make it an ideal site for your type of business. I feel sure that your company will fill a definite place in the industrial life of our city, and I hope that you will stop in my office the next time you are in Wilmington."

News of the Trade

Frank Pollard, secretary of Whiting-Patterson Company, Inc., 320 North Thirteenth street, will visit the paper mills of Consolidated Water Power and Paper Company, Gilbert Paper Company and Appleton Coated Paper Company in Wisconsin, and also the mill of Munising Paper Company of Munising, Mich., during the week of July 28.

R. W. Fishburn, vice president of Whiting-Patterson Company, Inc., is spending part of his vacation in New England.

J. R. Howarth, president of the J. R. Howarth Paper Company, led a motor caravan of his employees to Ocean City, N. J., on Saturday last for an all-day fishing trip. They made their headquarters at Margate City where Mr. Howarth had rented a cottage for the convenience of those attending. In all there were twenty-two employees participating. A large boat was engaged for the occasion, and all agreed they had a most enjoyable and successful fishing trip. Some of the party returned to their homes on Saturday evening while others remained at Margate and returned on Sunday.

George K. Hooper, president of the Hooper Paper and Twine Company, has just purchased a house at Tenth and Avalon Avenue, Avalon, N. J., which he will make his summer home in the future. Mrs. Hooper and their very attractive daughter, Miss Sarah, are planning to leave the city on Wednesday of this week to open their new summer home.

The Hooper Paper and Twine Company, 105 Church street, has recently been appointed agents in this territory for Board of Trade Bond which is a No. 1 sulphite bond made by the Mount Holly Paper Company, Mount Holly Springs, Pa. It comes in white and five colors.

Moore & White Company report the business outlook very encouraging. They have on order considerable machinery of special design, and state there is considerable pickup in friction clutch business. They are now working on a large double rotary cutter for the Delaware Paper Mills at Wilmington, Del.

Paper Men at Reserve Officers Camp

Lieut. Colonel Warren B. Bullock, manager of the Import Committee, American Paper Industry, and Lieut. W. Oliver Glenn, office manager, Liberty Mill Office of A.P.W. Paper Company, are attending the Quartermaster Reserve Officers Camp of Instruction at Fort Hancock, New Jersey.

Lieut. Colonel Bullock, though regularly assigned to the 502nd Port Headquarters, Q.M.Res. during the Camp of Instruction is Commanding Officer of the First Army Provisional Train.

One hundred Quartermaster Reserve Officers are attending this camp. The younger officers are learning the rudiments of army service and supply under the direction of the older, more experienced officers like Colonel Bullock. Working actual field problems, the knowledge and experience gained by the younger officers will prove invaluable—to the older officers it brings back memories.

To Be Gen. Mgr. of Three Rivers

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., July 22, 1935—Word reached here this week that Irwin H. Copeland, a former resident, has been promoted from general manager of the Canadian branch of the International Paper Company, Three Rivers, Quebec, to assistant manager of the newsprint division with supervision over all plants in Canada and Newfoundland. He is a native of this city and started his career with Finch, Pruyn & Co. Later he became associated with the Tidewater mill of the *New York Times* in Brooklyn and that mill was eventually moved to Murray Bay on the St. Lawrence River under his supervision. Several years ago he became identified with the Three Rivers mill of the International Paper Company as assistant to the manager.

Wallace Says U.S. Can Fill Own Pulp Needs

WASHINGTON, D. C., July 20, 1935—Secretary Wallace expressed the opinion today the United States could fill its own needs for pulpwood and paper, but questioned the advisability of "self-sufficiency" in this industry.

In a report to the Senate Mr. Wallace said expansion of the pulp industry would cut off imports, and possible benefits might be "offset by losses of foreign markets" for other commodities. The report was made in response to a resolution fostered by Senator Hale, Republican of Maine, in the last Congress.

Mr. Wallace's report, prepared by the Forestry Service, said expansion of the pulp and paper industry to a point of national self-sufficiency would have to take place in the South, the Pacific Northwest and "to a lesser extent in Alaska" rather than in the Northeastern States and Lake Region where it has been concentrated.

A move now is on foot to obtain Federal loans for development of paper pulp from pine in the Southern States.

The report is being used by Mr. Hale and representatives of the lumber industry to formulate demands for a quota on Canadian lumber and pulp imports under the proposed trade agreement with the Dominion.

Plan State Department Plea

They plan to ask the State Department to place a rigid restriction on imports from Canada as a boon to the pulp industry in the United States.

The report said further:

"The forests of the United States could supply present pulp and paper requirements, and this could be done with pulp and paper processes now in commercial use. If national needs for lumber and other forest products were also to be met, permanence could only be assured by sound forestry practices on both private and public forest lands."

Mr. Wallace's letter said:

"Whether the United States can meet present and future requirements for pulpwood resolves itself into two questions:

"The first involves physical factors, the growing of pulpwood and the availability of pulping process. Under adequate forest management, the answer is unquestionably 'yes.'

Competitive Factors Cited

"The second involves competitive factors. Although a period of stiff competition appears inevitable, it seems probable that in the long run we should be able to meet foreign competition successfully, especially since increasing world consumption may be expected to exert greater pressure on diminishing timber supplies in most exporting countries. * * *

"Expansion of the pulp and paper industry might contribute beneficially toward social and economic security in a number of ways. But to the extent that imports are cut off, these benefits may be offset by resulting losses of foreign markets and reduction in opportunities for employment in production for export, both in agriculture and industry. Whether it would be for the best interest of the country to become completely self-sufficient in wood pulp and paper, or whether it would be best to continue to import part of our requirements in exchange for commodities we export, cannot be accurately forecast at this time. * * * In view of these considerations, it does not seem wise to recommend that the United States strive to become fully self-supporting in paper and pulp requirements.

"But since forests can neither be organized nor industries established overnight, the highest public interest requires that a far-sighted national policy, which will conserve and restore the productivity of our forests, be outlined and pursued so that the nation will not be unprepared for possible future needs."

Weekly Production Ratio Report

Reports to the American Paper and Pulp Association show the following Over-All Production Ratios for the designated periods.

	Reporting Mills		Total Production Ratio
	Number	Capacity	
September, 1934	292–299	.....	59.4%
October, 1934	297–394	.....	64.7%
November, 1934	385–399	.....	61.7%
December, 1934 (a)	396–404	.....	62.1%
January, 1935	397–411	.....	65.8%
February, 1935	407–409	.....	70.0%
March, 1935	406–408	.....	70.5%
April, 1935	405–407	.....	70.0%
May, 1935	375–407	.....	69.4%
June, 1935	347–374	.....	71.9%
*Week ending July 6, 1935 (b)	338	119,024	58.1%
*Week ending July 13, 1935	265	109,441	65.4%

Statistics showing the number of mills reporting by ratio groups are given below:

	Number of Mills Reporting	
	Week ending	
Ratio Limits	July 6, 1935	July 13, 1935
0% to 50%	178	101
51% to 100%	160	164

* Subject to revision.

According to reports from the National Paperboard Association, per cents of operation, based on "Inch-Hours" were as follows:

	September, 1934	62 per cent
	October, 1934	63 per cent
	November, 1934	56 per cent
(a)	December, 1934	53 per cent
	January, 1935	61 per cent
	February, 1935	67 per cent
	March, 1935	67 per cent
	April, 1935	61 per cent
	May, 1935	61 per cent
	June 8, 1935	61 per cent
	June 15, 1935	65 per cent
	June 22, 1935	65 per cent
	June 29, 1935	69 per cent
	July 6, 1935	39 per cent
	July 13, 1935	63 per cent

(a) Capacity and percentage data exclude December 25, 1934.
(b) Capacity and percentage data exclude July 4, 1935.

Revised statistics covering delinquent mill returns will be shown in later reports.

Charles Ray Buys Home at New Mill Site

[FROM OUR REGULAR CORRESPONDENT]

MANCHESTER, Conn., July 22, 1935—Although no definite word has been given by General Manager Charles Ray of the Rogers Paper Manufacturing company as to whether the company will shift its activities and equipment to Goodyear, further indications that Manchester may lose one of its major industries is found in the announcement that Mr. Ray has purchased a home near the plant with intention of immediate residence.

Mr. Ray, who has been living in Hartford, has planned for recreational activities in Goodyear, including a baseball field, swimming pool and skating rink.

Obituary

J. Atwood White

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 22, 1935—J. Atwood White, of Valley road and Mountain avenue, Oak Lane, president of the Moore & White Company, 15th street and Lehigh avenue, manufacturers of paper-making machinery, died on July 14 at his residence.

Mr. White, who was 79, founded the firm which he headed for 50 years, having been established in the year 1885, and subsequently obtained many patents for his inventions in the field of paper manufacturing machinery.

Prominent as a church leader and philanthropist, he had long been an active member and was president of the Board of Trustees of the beautiful Oak Lane Methodist Episcopal Church. He was also a member of St. Paul's Lodge, F. and A. M.; Mary Commandery, Knights Templar and the Philadelphia Consistory, and a life member of the Manufacturers Club and Old York Road Country Club.

Surviving are his widow, Mrs. Amelia B. White; a daughter, Mrs. Reba W. Thornley, and a son, J. Atwood White, Jr.

Funeral services were held on Thursday, July 18th, and were attended by his immediate family and all the employees of the establishment which he founded, and also by paper manufacturers and mill executives outstanding in the paper fraternity from far and near. Revs. Willard L. Amthor and Virgil E. Rorer, lifelong friends of the deceased, conducted the funeral services. Interment was strictly private.

Edward H. Watson

Edward Hiscox Watson, aged 75, one of the most widely known figures in the paper industry, died July 15 after a week's illness in Midwood Hospital. He was a 33rd degree Mason, and resided at 400 East 21st street, Brooklyn, N. Y.

Mr. Watson, who was vice president and general sales manager of H. G. Craig & Co., Inc., New York Central Building, Manhattan, had been an active figure in the paper industry throughout a business career of almost sixty years. He spent the last thirty-five years selling newsprint, and was known and liked by newspaper publishers all over the country. Mr. Watson was associated with the Craig firm for the past twenty-eight years.

A native of Manhattan, Mr. Watson lived in Brooklyn most of his life. He was a member of Anglo-Saxon Lodge, 137, F. and A. M.

Mr. Watson was inducted into the Masonic Order Oct. 18, 1893, when he became a member of Anglo-Saxon Lodge. In 1903, he was made 33rd Degree Mason, a short time after he became a member of the Clinton Commandery. He held various Masonic offices and was a member of Aurora Grata Council, 756.

Surviving are his wife, the former Lillian Fulton; three daughters, Mrs. Maurine W. Coleman, Mrs. Christabel W. Wilcox and Miss Lillian F. Watson, and a sister, Mrs. Eugene O'Connor, Sr.

Also surviving are three grandsons, Robert Fulton Coleman, George H. Wilcox, Jr., and Warren Watson Wilcox.

Albert A. Lane

Albert A. Lane, New York paper merchant, died suddenly on July 22 of a heart attack at Ogunquit, Me., where he was passing the Summer. Mr. Lane, who was in his seventy-fourth year, resided at 28 Washington street, East Orange, N. J.

Born in Baltimore, Mr. Lane was the son of a well-known physician of that city, the late Dr. Frank Lane. When he was a young man Mr. Lane entered the employ of a flour concern as a salesman. Years later he founded the Lane Paper Company of New York, of which he was president. He was a former trustee of the North Orange Baptist Church, Orange, and was a member of the Arkwright Club of New York.

Mr. Lane is survived by his widow, Mrs. Alice Rutherford Lane; three sons, W. Rutherford Lane of Short Hills, A. Appleton Jr. and John A., both of East Orange, and three sisters, Mrs. Herbert Hawkins and Mrs. Pierpont Willson of Hamilton, N. Y., and Mrs. Charles McGrath of New York.

Roy M. Sperry

MONROE, Mich., July 22, 1935—Roy M. Sperry, aged 63, secretary of the Monroe Paper Products Company, since its organization in 1920, died recently at Monroe Hospital from diabetes and an attack of appendicitis.

Born at Angola, Ind., he came to Clinton County, Mich., as a boy. After completing a commercial course he worked for an insurance company, coming to Monroe in 1885 as secretary of the Greening Nursery Company. Two years later he married Mary Herbst. With three others he organized the Monroe Paper Products Company.

Mr. Sperry was a Knight Templar of Commandery No. 19 and a member of the Moslem Temple Shrine in Detroit.

Surviving are his wife, a daughter June, and a sister, Mary Sperry, of Detroit.

A. G. T. Moore on Southern Pine for Paper

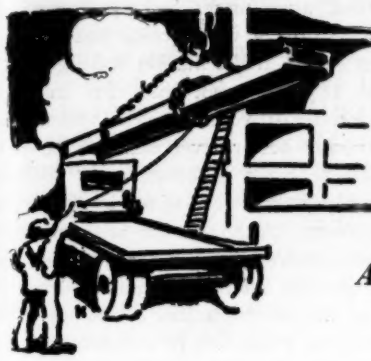
[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, July 24, 1935—A. G. T. Moore, manager of the Department of Conservation of the Southern Pine Association, has been in Washington following a hurried trip through the Laurentian mountain country in Ontario and Quebec, where he obtained a hasty impression of the forests and the newsprint mills of those provinces. Later Mr. Moore returned to the United States through the Jackman, Maine, route, and was able to get some high-spot impressions of the Maine woods and inspect a paper and pulp operation near Moosehead. He returns to the South more firmly than ever of the opinion that there is "gold in them thar trees," which grow so prolifically in the favorable environment of the South, when newsprint and white paper manufactured from them finally pass from the laboratory to the commercial stage. Mr. Moore is convinced that aside from the rapidity of wood growth in the South there are other advantages, such as unbroken operations throughout the year, avoidance of assembling and other costs which are necessary in Canada. Another reason that prompts Mr. Moore to believe in the future of the newsprint industry in the South is the desirability of keeping the forested and restricted land areas in private ownership, which can be met by tree crops which may be more frequently gathered than those utilized in the manufacture of lumber.

Container Corp. Resumes at Wabash

[FROM OUR REGULAR CORRESPONDENT]

WABASH, Ind., July 22, 1935—A two weeks' suspension of the local unit of the Container Corporation of America as a result of labor difficulties, ended last Wednesday. About 250 persons returned to work it was announced.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Chicago, Ill.—The Chicago Carton Company, 4130 Crawford avenue, manufacturer of folding paper cartons, boxes, etc., has approved plans for new plant at 4200-14 Pulaski road, to be one-story, 120 x 169 feet, designed for storage and distribution, and other operating service. General contract has been awarded to Poirot Construction Company, 2001 West Pershing road. Cost close to $35,000, including equipment. A. Epstein, 2001 West Pershing road, is architect and engineer.

Erie, Pa.—The Hammermill Paper Company is considering construction of new building in Erie Harbor district including dock facilities, for storage and distributing service. No estimate of cost has been announced.

New York, N. Y.—Kraft Corrugated Containers, Inc., recently organized with capital of $100,000, plans operation of local plant for manufacture of corrugated boxes and containers. Incorporators of new company include Benjamin Rosenfeld, 2961 Brighton (Thirteenth) street, Brooklyn, N. Y., and Nathan Wald, 1170 Broadway, New York.

Meadville, Pa.—Viscose Company of America, Inc., Marcus Hook, Pa., manufacturer of viscose rayon products, has approved plans for four new mill additions at branch plant at Meadville, two of the units to be equipped for general production and other two to be used for storage and distribution. Cost over $475,000, with equipment. General contract has been let to Wark & Company, 1608 Walnut street, Philadelphia, Pa. and superstructure will be placed under way at early date. Structures are scheduled to be ready for service in the fall when substantial additions will be made in working force. H. H. Bitler is plant manager.

Bastrop, La.—The Southern Kraft Corporation is making a number of improvements at its mill to provide for increased capacity of kraft wrapping paper stocks. It is proposed to increase the working force to about 500 persons in all departments. Company is a subsidiary of the International Paper Company, 220 East 42nd street, New York, N. Y.

Savannah, Ga.—The Union Bag and Paper Corporation, Woolworth Building, New York, N. Y., has awarded contract to the Jones & Laughlin Steel Corporation, Pittsburgh, Pa., for quantity of steel shapes, totaling about 2150 tons, for steel frame superstructure for new mill units for paper and pulp plant. and paper converting mill at Hermitage Plantation, Savannah, previously referred to in these columns. It is proposed to begin building superstructures in near future. Merritt, Chapman & Scott Corporation, 17 Battery place, New York, N. Y., is general contractor. Entire project will cost close to $4,000,000, including equipment. George F. Hardy, 309 Broadway, New York, is engineer.

Lowell, Mass.—General Carton Corporation has been formed with capital of $25,000, and plans early operation of local plant for the manufacture of folding paper cartons and other paper containers. Irving H. Fowle is president, and Samuel Alman, 71 Cheney street, Roxbury, Mass., treasurer and representative.

Chicago, Ill.—The Cromwell Paper Company, 4801 South Whipple street, manufacturer of paper products, has superstructure under way for new one-story plant addition at 4821-29 South Whipple street, recently referred to in these columns, and will have unit ready for service in near future. It will be 101 x 270 feet, estimated to cost approximately $80,000, including equipment. A. T. Herlin & Son, 6816 Clyde avenue, Chicago, are general building contractors.

Port Huron, Mich.—The Dunn Sulphite Paper Company, foot of Riverview street, manufacturer of tissue stocks, etc., is running on good capacity schedule, giving employment to over 100 workers in different departments. It is proposed to hold to this basis of output for an indefinite period.

St. Louis, Mo.—The Consolidated Manufacturing Company, recently organized, plans operation of a local paper converting plant for manufacture of a line of paper products for commercial use. George Tilles, Jr., and Otto L. Swanzey, 928 Bellerive boulevard, St. Louis, are principal incorporators of new company.

College Point, N. Y.—The Lily-Tulip Cup Corporation, 122 East 42nd street, New York, is giving over large part of output at plant at College Point to manufacture of various paper food containers, with paper drinking cup production of secondary volume. Company has recently developed a new paper pail in large sizes for frozen vegetables and kindred food products; containers are also being manufactured in large volume for ice cream, butter, etc. Employment is being given to large working quota at company plants.

Chicago, Ill.—The Standard Label Company of Chicago, Inc., 416 South Dearborn street, has been chartered with capital of 500 shares of stock, no par value to manufacture and deal in paper labels and kindred products. The incorporators are H. B. Hanigan, Joseph G. Hagstrom and Charles S. Connell.

New York, N. Y.—The Penn Kem Card Company, Inc., has been incorporated with capital of 200 shares of stock, no par value, to manufacture and deal in card stocks, playing cards, etc. The incorporators are Paul Martinson and Jacob Chaitkin, 60 East Forty-second street.

Cleveland, Ohio—The Packaging Products Corporation has been chartered with capital of 250 shares of stock, no par value, to manufacture and deal in paper containers of various kinds, etc. The incorporators are Stanton Addams and M. W. Kastriner, National City Bank Building, Cleveland.

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BASIS FOR A NEW AND MORE PERMANENT ORGANIZATION PROGRAM

The American Paper and Pulp Association believes that the wise and conservative administration of the NRA code has given the industry an invaluable experience on which a new and more permanent organization program can be based. In the current issue of its Monthly Review, it asserts that the pulp and paper industry has met successfully the first tests since the passing of the NRA and expresses confidence in the future. Continuing, the article says that the abrupt change in the status of the NRA created a vast uncertainty in many industries. For a time manufacturers were subjected to the possibilities of precipitous action of competitors. What each did in respect to labor and trade practices was more than ordinarily important, for if a significant break occurred, the pressure for it to spread throughout industry could hardly be resisted. But no break occurred in the paper industry in the first month after the NRA.

In meeting this first test the industry has renewed its confidence. Each manufacturer has gained faith in his competitors. And with this renewal of confidences, the chances of substantial break in either labor or trade practices decline.

Furthermore, the pressure upon manufacturers is decreasing. Obviously paper users and merchants were faced with as great uncertainty as were manufacturers. If prices were to be lowered, each wished to participate. Naturally, buying was postponed, and naturally, too, some purchasers tempted manufacturers with large tonnages at lower prices. The manufacturer was forced to decide which course to follow; often his decision had to be made before there had been opportunity to accurately survey market conditions. Yet the market held.

The termination of the NRA occurred at a fortunate time for the paper industry. In spite of the uncertainty that it created, the suddenness of the Supreme Court's decision created a distinct fear of consequences, for it came at a time when production was holding fairly well over a seasonal decline period, when prices had not moved upward for a long period during which costs had mounted constantly, and when stocks in the market were generally low. Where would a price break lead, for instance? Would price reduction boost volume when volume was running at a substantially better level than in the past? Could cost reductions be made to offset price declines? These and many other questions were raised in stark relief before each manufacturer. Although the final answer is not yet made, the first answer has been on the constructive side; the status quo has been maintained.

The maintenance of the present status is obviously only a first step in the transition from code to voluntary association activity. It is, however, a necessary one in order that the gains of the past two years may be preserved and consolidated. Although it may depend to some extent upon legislation, the future program certainly involves further development in co-operative activities in the group approach to common problems. Industries that undertook code administration wisely and conservatively have had at least two years' experience upon which new, more permanent organization programs can be based.

INDUSTRIAL ACTIVITY FOUND MARKEDLY GREATER IN FIRST-HALF YEAR

Industrial activity during the first six months of this year was markedly greater than during the corresponding period of 1934, according to a report by the National Industrial Conference Board. The trend of business during June, the board finds, registered a slight improvement over the preceding month and remained considerably above the levels of the same month last year.

Of the more important indexes of production and distribution, only two—total carloading and steel production—were lower during the first half of 1935 than a year ago, the report states. The percentage changes in the major industries in the first half of 1935 compared with the same period last year are computed by the board as follows:

Indexes of production: Automobiles +31.1, steel ingots −1.6, residential building +58.0, petroleum +5.8, bituminous coal +3.7, machine tool orders +46.5, electric power +5.2.

Indexes of distribution: Total carloadings −1.7, miscellaneous carloadings +0.6, department store sales (volume) +4.0.

"Substantial gains have been registered in residential building, automobile production and orders for machine tools," the board says. "Demand for these goods is highly cyclical in character and the impressive rise of the past six months indicates that the shortages which have long been known to exist in such durable consumers' goods as houses and automobiles and in production machinery are at last beginning to make themselves felt.

"Both wholesale and retail prices advanced measurably during the first half of 1935. The advance in wholesale prices was approximately 3.5 per cent. The board's index of retail prices stood at 75.5 of the 1926 average in Decem-

ber and by June of this year had risen to 78.0 per cent, or an increase of 3.4 per cent.

"Exports of merchandise for the first five months of 1935 amounted to $835,763,000, or 1.7 per cent less than in the corresponding period of 1934. The decline was greatest in raw material and food classifications; exports of semi-manufactured goods were approximately the same as last year. Sales abroad of finished manufactures were about 12 per cent higher than in the first five months of 1934. Thus the greater part of the decline occurred in agricultural products, with non-agricultural exports apparently higher than last year.

"Merchandise imports from January to May aggregated $829,145,000, or 19.1 per cent higher than during the first five months of 1934. Increases were general in all of the major classes of imports. Of the total exports up to the end of May, 1935, 28.2 per cent were agricultural and 71.8 per cent were non-agricultural commodities. Of total imports during the same period, 56.4 per cent were agricultural and 43.6 per cent were non-agricultural."

New capital flotations during the first half of 1935 aggregated $2,020,000,000, exclusive of United States Government issues but including issues by government agencies, the board points out. This is the heaviest volume of financing done since the first six months of 1931, but only a small amount represented new capital for private industry.

In the field of production, the board says, greater-than-seasonal rises were reported last month by the construction, petroleum, coal, electric power and machine tool industries. Distribution, as represented by miscellaneous freight traffic and retail sales, showed considerable improvement over that reported for May.

Urge Maine To Aid Paper Industry

[FROM OUR REGULAR CORRESPONDENT]

BRUNSWICK, July 22, 1935—A campaign to secure the support of Maine citizens in saving the paper and pulp industry from being choked out by foreign competition was opened in Brunswick recently. It is planned to hold these meetings throughout the State. The campaign was gotten underway at the Rotary club meeting when Edgar Rickard, president of the Pejepscot Paper Company, Arthur L. Hobson, vice president of the St. Croix Paper Company and J. W. Taylor, vice president of the International Union of Pulp, Sulphite and Paper Workers, all spoke in favor of an agreement with foreign countries limiting the amount of newsprint to be dumped on the market in this country. Their appeal had its immediate effect on the Rotarians, who at the suggestion of ex-State Senator Ellis R. Aldrich, passed a resolution to the effect that the Rotary Club of Brunswick endorses taking action which will bring about relief to the paper and pulp industry of Maine. Several Rotarians offered to write letters to their Congressmen urging the need of immediate action.

J. W. Taylor, representing labor's attitude towards the campaign, said that "labor is willing to go up the line with the manufacturers. We ask you to help us revive and maintain the paper and pulp industry in Maine." He gave figures to show the inroads made in the domestic market by foreign countries.

Westinghouse Profits Best in Five Years

Westinghouse Electric and Manufacturing earned $6,265,188 net profit the first half of 1935, the best showing for a similar period since 1930. It compared with a net loss of $31,725 the initial six months last year and larger deficits in each similar period the three preceding years.

The six months profit was equivalent to $2.37 a share on the common stock after preferred dividend requirements. In 1930, the last previous year the company earned a profit for the initial six months, the net was equal to $3.14 a share.

For the June quarter net profit amounted to $3,938,692, or $1.50 a share on the common stock compared with 87 cents the preceding three months and 65 cents a share the June period a year ago.

Orders received during the half year totaled $64,984,915, of which $34,222,014 was reported in the initial three months. It compared with $53,902,610 the first half of 1934 and $33,655,022 the first quarter a year ago.

Sales billed this year to date amounted to $62,296,017 compared with $45,281,590 the 1934 half.

In its report the company stated orders received the second quarter were the highest since the same three months of 1931 and sales billed the first six months 38 per cent greater than for the same period of 1934.

The earnings for the six months included $926,753 profit from the payment of back dividends on, and the sale of, stock of the Radio Corporation of America. Operations for the balance of the year, the report said, "should show satisfactory results, although the seasonal peak is past."

Referring to the proposed Government tax on big business, the company stated:

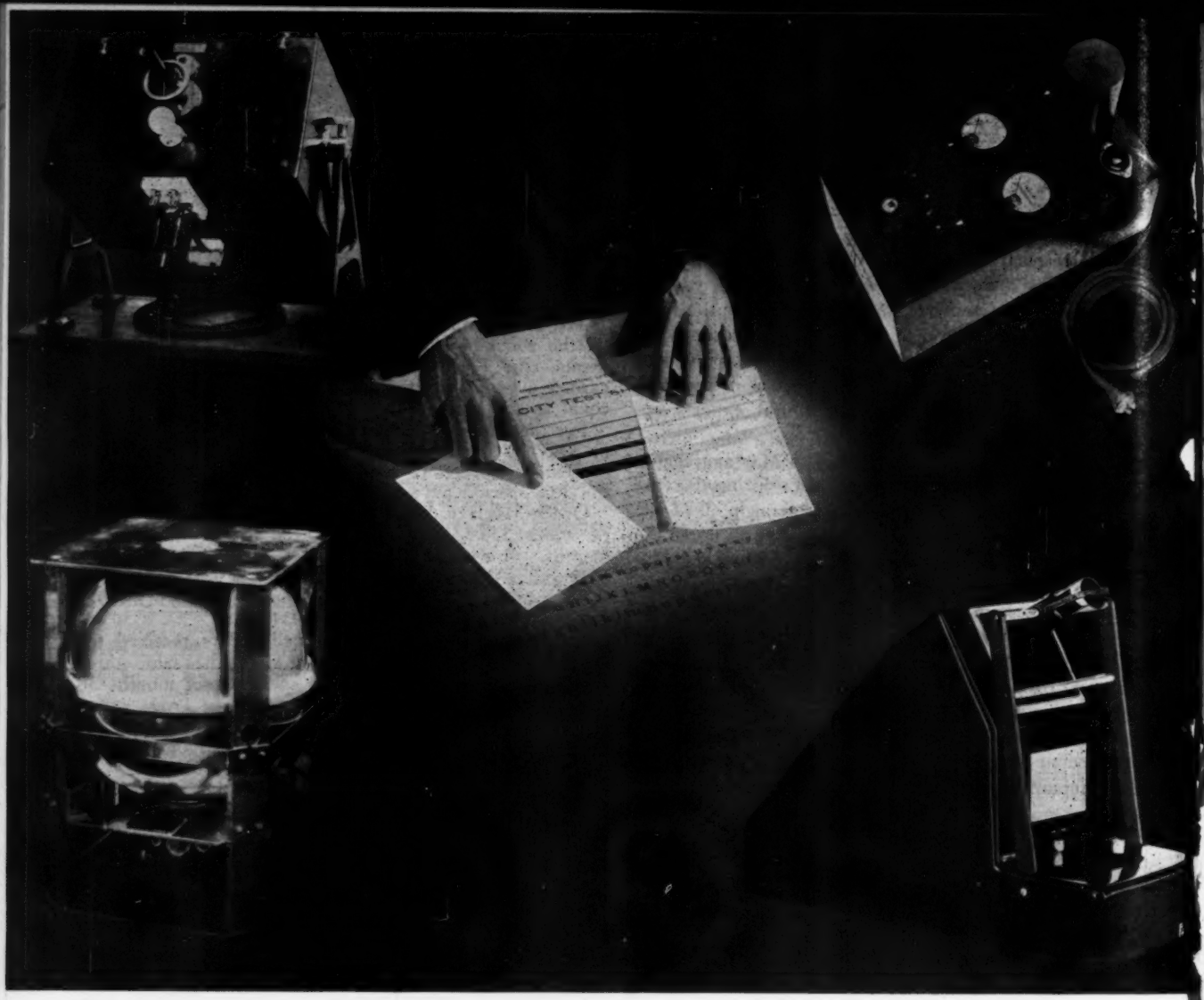
"Your company is owned by 48,734 stockholders, of which 41,399 own less than 100 shares of stock each. With such a wide distribution of the stock among so many owners, it may readily be seen that imposing the tax on a graduated basis does not necessarily accomplish the purpose of taxing 'bigness' but will curtail the payment of dividends and severely penalize the small as well as the large stockholder."

The company declared it a duty to call the attention of its stockholders to the constant increase in the tax burden and "especially this discriminating unsound proposal of a graduated income tax for corporations."

Estate of David M. Anderson

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., July 22, 1935—The gross estate of the late David M. Anderson, vice president of the St. Regis Paper Company, is valued at $699,912.44, exclusive of $328,375.70 in trusts made for the benefit of others, according to an appraisal just completed by the county treasurer. Total deductions from the gross amount to $112,638 which consists of funeral expenses and a benefit for the local Community Chest. Under terms of the will the net estate is bequeathed to his daughter, Mrs. E. A. Wise. Stocks and bonds having a value of $427,231.36 constitute the largest part of the estate and include 20,000 shares of St. Regis Paper Company with substantial holdings of Taggart Brothers and other Northern New York enterprises. The realty of the estate is appraised at $13,824.33. Several notes and mortgages held against others are appraised at $20,096.97 and twenty life insurance policies aggregate $160,660.80. Miscellaneous property amounts to $5,382.10. The executors are Mrs. Wise, H. Edmund Machold and Henry Wise.



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Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Pulp and Paper Industry Literature Review

Abstracts of Articles and Patents Compiled by the Abstracts and Bibliography Committee of the Technical Association of the Pulp and Paper Industry, A. Papineau-Couture, John F. Ohlson, C. E. Peterson and Clarence J. West, Chairman

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Paper Specialties

Insulating Material. Edward A. Toohey and Earle R. Williams assignors to Johns-Manville Corp. U.S. pat. 1,972,500 (Sept. 4, 1934).—Shrinkage of insulation such as asbestos paper pipe-covering, when heated, is partly or completely eliminated by treating the asbestos fiber in the beater with a hygroscopic binder and a water-repellent substance such as paraffin.—A.P.-C.

Fabrication of Corrugated Papers. Charles O. Ives assignor to Sherman Paper Products Corp. U.S. pat. 1,975,548 (Oct. 2, 1934).—Single-faced corrugated paper is rendered flexible and pliable in all directions by creating impressions or recesses in the corrugations inwardly toward the facing sheet, along lines intersecting the corrugations at closely spaced intervals, but not so close as to destroy the essentially corrugated nature of the sheet. —A.P.-C.

Process of Manufacturing Waterproof Crepe Paper. Friederich M. O. Pinoff assignor to The Patent and Licensing Corp. U.S. pat. 1,975,286 (Oct. 2, 1934).—Paper that has been waterproofed by means of an aqueous bituminous emulsion is creped before it has been completely dried.—A.P.-C.

Paper Fabrics. George A. Richter and Milton O. Schur assignors to Brown Co. U. S. pat. 1,969,855 (Aug. 14, 1934).—Paper having as high wet strength as dry strength is made from strips of kraft paper containing 1% or more of regenerated cellulose.—A.P.-C.

Copying Paper. Shinjiro Horii. Japan. patent 101, 743 (June 26, 1933).—Suitable paper is coated with a mixture of a fatty acid, an oil or a wax and a precipitate obtained from a dye solution, a soap and magnesium chloride or aluminum sulphate.—C.J.W..

The Work of Vniib in the Production of Cable and Telephone Paper in U. S. S. R. Ya. G. Khinchin. Materialui Vsesoyuz. Nauch.-Issledovatel. Inst. Bumazh. Tzellyuloz. Prom. (Trans. All-Union Sci. Research Inst. Paper Cellulose Ind.) 1932, no 4:3-20; C. A. 28:5665. A summary of the results of experimental work and production of telephone and low-voltage cable paper from domestic sulphite pulp. The positive results require further factory experience. Refining of pulp by treatment with sodium hydroxide increases its thermal resistance. —C.J.W.

Purification of Zinc Chloride Solutions from Iron in the Production of (Parchmentized) Fiberboard. F. I. Korchemkin. Materialui Vsesoyuz. Nauch.-Issledovatel. Inst. Bumazh. Tzellyuloz. Prom. (Trans. All-Union Sci. Research Inst. Paper Cellulose Ind.) 1932, no. 4:149-155; C. A. 28, 5665.—Zinc chloride solutions (46° Be.) were freed from contaminating iron and $FeCl_2OH$ by the action of atmospheric oxygen, hydrogen peroxide and chlorine. The chlorination method is more rapid than that with atmospheric oxygen and cheaper than that with hydrogen peroxide. For the neutralization of hydrochloric acid formed in the process with chlorine, zinc hydroxide or zinc dross free from iron was used. The corrosive action of purified zinc chloride solutions on copper vessels is greater than that of the crude solutions and can be reduced by a short contact with zinc.—C.J.W.

Adhesive Sheets and Tapes. Ernest L. Kallander and Robert F. Charles assignors to Dennison Manufacturing Co. U.S. pat. 1,956,579 (May 1, 1934).—Crepe paper is used having an unfinished surface and a parchmentized surface, and the unfinished surface is coated with a tacky coating of partially vulcanized rubber.—A.P.-C.

Method and Apparatus for Treating Shingles or Shingle Strips. Bernard C. Beckman assignor to The Patent and Licensing Corp. U.S. pat. 1,967,856 (July 24, 1934).—The butt portion and exposed edges of shingles or shingle strips are coated by immersing the strip or shingle vertically in a bath of molten asphalt that is moved at the same speed as the horizontal displacement of the shingles.—A.P.-C.

Roofing Machine. Albert E. F. Moone assignor to The Lehon Co. U.S. pat. 1,967,419 (July 24, 1934).—The invention consists in a grit-distributing unit which can readily be adapted to existing machines and whereby various colored grits can be fed on to impregnated roofing felt so as to form patterns or color schemes which can readily be varied as desired.—A.P.-C.

Method and Apparatus for Making Roofing. Daniel C. Betjeman assignor to The Patent and Licensing Corp. U. S. pat. 1,973,863 (Sept. 18, 1934).—A number of differently designed or shaped shingles, shingle strips and roll roofing are made from a single sheet of impregnated roofing felt by slitting the latter longitudinally into a number of strips and passing the strips through appropriately shaped cutting rolls to divide each strip into shingle elements. The elements obtained from the several strips may be of different forms.—A.P.-C.

Process of Making Strip Shingles. John A. Topping assignor to Asphalt Process Corp. U. S. pat. 1,975,487 (Oct. 2, 1934).—The length of the strips is equal to the width of the web of prepared roofing. The latter is cut along many lines forming the front and back edges of the strips, and in the same operation slots are cut at intervals in the front edges of the strips to define the tabs simulating individual shingles.—A.P.-C.

Asphalt Prepared Building Material and Method of Making Same. Jules L. Wettlaufer assignor to The Patent and Licensing Corp. U. S. pat. 1,972,810 (Sept. 4, 1934).—The invention provides a sheet material which, when laid on a wall, creates the effect of individual bricks. A sheet of felted fibrous material which has been saturated with asphalt is given a heavy coat of waterproofing substance such as asphalt. While the coating is still hot narrow grooves of coating are scraped or doctored longitudinally of the sheet at spaced intervals; fine granular material such as slate is applied to the grooves, after which coarse granular material is applied over the entire surface of the sheet, and the latter is pressed to cause the granular material to adhere to the surface. Simultaneously with or after the pressing, the sheet is kerfed or scored transversely at spaced intervals so as to completely embed the granules in the coating and expose the latter along spaced narrow transverse bands thereby completing the design on the surface of the sheet.—A.P.-C.

Artificially Colored Building Material and Method of Producing Same. Orin R. Douthett assignor to The Patent and Licensing Corp. U. S. pat. 1,970,953 (Aug. 21, 1934).—Granular surfacing material is applied to an impregnated and coated roofing felt, which is pressed sufficiently to partly imbed the surfacing particles in the asphalt coating. A colored silicate solution is sprayed on to the sheet, and after drying a suitable insolubilizing solution (*e.g.*, ammonium sulphate or ammonium chloride) is sprayed to set the silicate.—A.P.-C.

Machine for Manufacturing Composition Roofing. Arthur G. Leonard, Jr., assignor to Orenda Corp. U. S. pat. 1,975,584 (Oct. 2, 1934).—The invention provides a machine for making the felt, drying it, impregnating it while it is still hot on leaving the driers, coating, surfacing, cooling and finally cutting into shingles or shingle strips. Means are provided for independently adjusting the operation of each unit of the machine.—A.P.-C.

Roofing and Siding Element and Method of Producing Contrasting Effects Thereon. Norman P. Harshberger assignor to Bakelite Building Products Co., Inc. U.S. pat. 1,969,074 (Aug. 7, 1934).—In surfaced roofing elements having depressed lines of demarcation, the depressed lines are surfaced with finer size mineral particles than the underpressed portions.—A.P.-C.

Process and Apparatus for Making Building Strips. Albert E. F. Moone assignor to Lehon Co. U.S. pat. 1,968,535 (July 31, 1934).—A suitable design (*e.g.*, brick outlines) is painted or printed on a (preferably) presurfaced sheet of building material, which is simultaneously cut transversely with complete but non-continuous cuts at the exact positions desired with respect to the design. The printed design is surfaced; the sheet is cooled in the usual way and slit longitudinally, and the transverse severance is completed by pulling apart.—A.P.-C.

Apparatus for the Treatment of Toilet Paper. Harold W. Sherman assignor to Northern Paper Mills. U.S. pat. 1,967,726 (July 24, 1934).—The absorbency and quality of a glazed, comparatively stiff toilet paper are improved by passing between a lower yielding roll (made of pressed paper pulp) and an aupper roll on the surface of which are series of raised portions which roughen and break up the surface of the sheet of toilet paper.—A.P.-C.

Artificial Leather. Max N. Nickowitz assignor to E. I. du Pont de Nemours and Co. U.S. pat. 1,967,967 (July 24, 1934).—Absorbent paper or felt made from artificially crinkled pulp is impregnated with rubber latex, a rubber coating is applied, followed by a top coat of an asphalt composition, and the product is baked.—A.P.-C.

Production of Vapor-Proof, Elastic, Flexible Paper. Chester Snyder assignor to Angola Chemical Corp. U.S. pat. 1,967,043 (July 17, 1934).—Paper is coated with a mixture of jelutong gum and castor oil, which has been heated to 300° to 400°F., with or without addition of butyl alcohol.—A.P.-C.

Distended Fibrous Product. Frank L. Bryant assignor to Cellufoam Corp. U.S. pat. 1,966,437 (July 17, 1934).—This is a modification of Bryant's U.S. pat 1,740,280, of Dec. 17, 1929, and provides for beating the stock before adding the foam-producing agent, and incorporating waterproofing or fireproofing agents either before, at the same time as, or after the foam-producing agent.—A.P.-C.

Production of Materials, Decorative Articles, and Protecting Linings or the Like, By the Transformation of Fibrous Cellulose Materials. Valentino Bosso, Nicolo Silvestrini and Francesco Sacchi, assignors to Guido Botta. U. S. pat. 1,970,273 (Aug. 14, 1934).—The invention provides decorative or protective linings for walls, floors, ceilings, furniture, etc., consisting of a fibrous sheet in which the fibers are irregularly distributed for obtaining marbling and vein-like effects.—A.P.-C.

Method of Making Asbestos Board. Izador J. Novak assignor to Raybestos-Manhattan, Inc. U. S. pat. 1,971,162 (Aug. 21, 1934).—Asbestos board suitable for friction elements is obtained by engine sizing the asbestos fiber with the usual sizing agents, but in alkaline instead of acid solution, preferably at a pH of about 8 to 10.—A.P.-C.

Method of Making Fiber Products. August Gerard and Maurice Weisman assignors to Cotton-Wood Products, Inc. U.S. pat. 1,970,742 (Aug. 21, 1934).—Waste papers are beaten while dry into relatively small particles consisting of separate fibers of substantially completely disintegrated paper and of small flakes of incompletely disintegrated paper having a greater maximum length than of the fibers. The disintegrated paper is formed into a sheet of insulation or of cushioning pad between two sheets of paper or fabric, adhesive being applied to the inner face of each of the lining sheets. The combined sheet is split medially, each of the cleavage surfaces thus exposed is treated with finely divided solution of adhesive and the two are recombined and pressed.—A.P.-C.

Moisture—and Water-Proofing Composition for Paper. Russell L. Jenkins assignor to Swann Research Inc. U.S. pat. 1,960,266 (May 29, 1934).—A chlorinated diphenyl resin is used with a wax such as paraffin and with an ester gum or mineral oil, dibutylphthalate, etc.—A.P.-C.

An Instrument for Formation Measurement*

By Myrl N. Davis[1], Walter W. Roehr[2], Homer E. Malmstrom[2]

Previous to the decision to use quantitative grading of the goodness of "formation" of uncoated book papers in the control of price grading of those papers, there appears to have been little real demand for the development of an orderly system for the visual comparison of the "formations" of different samples of paper or for an instrumental means of effecting such comparisons. A few paper manufacturers had set up systems for visual comparison of their own products and were using these systems in control or supervisory testing.

Two systems for the visual comparison of samples of uncoated book paper with arbitrarily chosen standard samples and yielding the result of the comparison in a single numerical quantity were available for use at the time that the grading program to apply to uncoated book papers was set up. One of these systems was adopted for use as the official formation test and has been in continuous use, since that time, in grading the formation of all uncoated book papers.

The economic importance of the results of a formation test on any sample of paper made it seem highly desirable that the visual system of grading, involving the comparison of exceedingly dissimilar types of formation by visual examination, be replaced by some instrumental means of making the measurements. The instrument herein described was designed and built in the hope that it might prove to be an improvement over the system already in use.

The Formation Tester

In its essential elements the instrument designed to measure the formation of a sample of paper is quite simple. Fig. 1 is a schematic diagram of the formation tester.

Light from the light source passes through a diaphragm of variable aperture and enters a lens system. Sharply converged by the lens system the light passes through the first of two plate glass discs which serve to hold between them the sample of paper under test. After transmission through the sample where it is diffused, the light continues on through the second plate glass disc. As much as possible of the transmitted light is collected in a photocell placed immediately below the lower glass disc. The resulting photoelectric current passes on to the input terminals of an amplifier system which will be described later.

The sample is cut in the form of a disc of paper seven or eight inches in diameter. During the formation test it is placed between and supported by two discs of plate glass. All three discs are mounted on and rotate with a vertical spindle. The spindle is driven by an electric motor whose speed characteristics are such that the rate of rotation is almost independent of the line voltage used as a source of power. Carefully turned brass discs are cemented into the centers of the plate glass discs. The spindle turns freely on ball bearings.

The system as described gives us a small spot of light focussed upon the surface of a sample rotating at uniform speed. The light transmitted by the sample generates a current in the photocell which, at every instant, measures the light transmission of the small area of the sample upon which the light is at that instant directed. One complete revolution of the sample serves for the complete measurement of the transmission of that area of the sample which passes between the spot of light and the photocell.

The area of sample explored by a light spot less than two millimeters in diameter travelling around a circle 13 cm. in diameter is less than 1.3 sq. cm. Since an increased area of exploration seemed desirable (especially as test results were found to vary erratically with the radial distance of the light spot from the center of the sample), the instrument was altered so that the light spot could be made to oscillate between a minimum distance of 5.5 cm. and a maximum distance of 7.5 cm. from the center of the sample. To accomplish this the entire optical system including light source and photocell were mounted at the ends of a pair of leaf springs. The mass of the moving system and the characteristic of the springs were so chosen that the light spot completes approximately four radial oscillations per second.

Using the above system the path of the exploring light spot over the rotating sample is a long spiral requiring about three revolutions of the sample in which to complete the motion from its extreme outer to its extreme inner position. The spiral then reverses its direction for three revolutions. One scarcely need point out that during the course of any one second the area (approximately 80 sq. cm) included between inner and outer extreme positions of the light source is rather thoroughly explored.

The photoelectric current set up by such a system will vary in amplitude with time in exactly the same way as the light transmitted by the sample varies with time. It will accordingly consist of an electric wave of complicated form. This wave may be considered as the sum of a constant direct current of suitable magnitude and an alternating current of complicated wave form. It may be shown that the value of the direct current component is proportional to the mean transmission of the area of the sample undergoing exploration by the light spot. Similarly the value of the alternating component at any instant is proportional to the difference between the transmission of the area undergoing illumination at that instant and the average transmission of the entire area explored. Measurement of the direct and alternating photo-electric currents by the usual methods will then give us a value proportional to the mean transmission of the explored

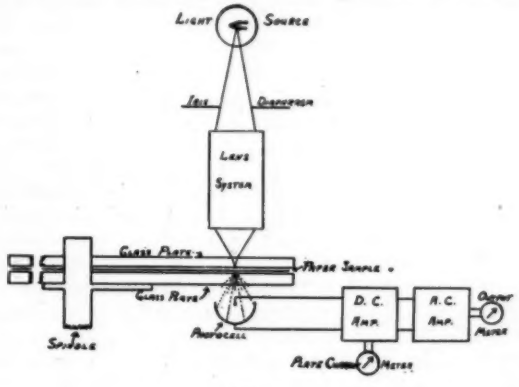

FIG. 1.
Schematic Diagram of Formation Tester

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portion of the sample and a value proportional to the root-mean-square deviation of the light transmission of the sample at any instant from the mean value of the transmission.

Unfortunately the direct component of the photoelectric current is of such magnitude as to be accurately measurable only by use of the more delicate of portable microammeters, while the alternating component is so small as to make measurement without preliminary amplification impossible. Since certain advantages are to be gained by using d.c. as well as a.c. amplification, the photo-electric current is subjected before measurement to one stage of amplification in which both d.c. and a.c. components are amplified and two succeeding stages in which only the a.c. component is amplified.

The direct current component of the photoelectric current is measured by a scheme which involves the adjustment of the intensity of the light incident upon the sample (by means of adjustment of the aperture of the shutter placed between light source and lens system) until the d.c. component of the photocurrent assumes some standard value. Obviously this adjustment of the intensity of the incident light makes proportional changes in the values of d.c. and a.c. components and will not affect their ratio. The standard value of the photoelectric current is determined by a null method, the voltage drop across a high resistance due to the flow of the photoelectric current being opposed by a constant voltage of opposite sign and the light intensity varied until the effect of the two opposing voltages is zero as judged by the reading of a d.c. meter in the plate circuit of the first amplifier tube. Since a d.c. meter measures the average value of the current flowing through its coils, the amplified a.c. flowing in the plate circuit of the first tube will not affect the accuracy of the d.c. balance. Since, at balance, the grid of the first amplifier tube is subjected to exactly the same voltage as if no d.c. photoelectric current were flowing, amplification of the a.c. component of the photocurrent is independent of the value of the d.c. component.

The a.c. current is subjected to one stage of direct resistance coupled amplification and to two succeeding stages of resistance-capacitance coupled amplification. The electrical characteristics of the amplifier have been so designed that the amplification is almost independent of frequency over a range of frequencies from 20 to over 10,000 c.p.s. A volume control is incorporated between the first and second stages of the amplifier.

The filaments of the amplifier tubes are supplied with current by two ordinary dry cells. Light and compact radio "B" batteries furnish potential to the various tubes and to the photoelectric cell. A voltmeter indicates the value of the filament voltage at all times except when a pushbutton is being used to connect the meter to the plate supply batteries. A rheostat is used to control the filament voltage. All batteries are mounted inside the amplifier cabinet making the amplifier readily portable.

Power for the light source is supplied by a transformer operating from the commercial a.c. mains which also supply power to the motor which drives the spinning discs. With transformer and motor mounted inside the cabinet which houses spindle, discs, optical system and photocell this portion of the apparatus is also portable. The photocell is connected to the amplifier by a cable, terminals of which plug into the input terminals of the amplifier.

The amplified a.c. voltage is read off a meter mounted (as is also the d.c. meter) in the panel of the amplifier cabinet. The voltmeter is provided with a scale which reads in reciprocals of the actual voltage impressed on its terminals. Use of the reciprocal scale allows direct reading of the formation number of the sample under test (under conditions which will presently be described).

Theory of the Formation Tester

In describing the scheme for d.c. measurement we stated that the intensity of the light incident upon the sample is adjusted until the voltage drop due to flow of photocurrent in a high resistor has a standard value which we will now call E. Assuming that the photocurrent is proportional to the intensity of the light striking the photocell, we may write

$$E = I\bar{T}kR$$

where I is the intensity of the light incident upon the sample, $\bar{T}$ is the mean value of the transmission, to the light incident upon it, of the sample area being explored, k is the constant relating the intensity of the light incident upon it and the photoelectric current and R is the value of the high resistance.

The value of the alternating component of the voltage drop across the resistance R at any instant will be

$$v = I(\bar{T} - T)kR,$$

where T is the transmission of the point subjected to illumination at that instant. After amplification by a factor A the root-mean-square voltage, as read on a normally calibrated output meter, will be

$$V = IkRA\sqrt{(\bar{T} - T)^2}$$

It is to be understood that the quantity under the radical is the mean of the square of the difference indicated within the parentheses.

Let us form the ratio of E to V, at the same time multiplying both sides of the resulting equation by A in order that the righthand side of the equation shall contain only terms pertaining to the light transmission characteristics of the sample of paper. We have

$$\frac{A\,E}{V} = \frac{\bar{T}}{\sqrt{(\bar{T} - T)^2}} = F$$

The number F defined by the above equation will be called the "formation number" of the sample to which it applies. Its significance will be considered later.

As we have said, the output voltmeter is actually calibrated in terms of the reciprocals of the voltage impressed across its terminals. Letting Q represent the reciprocal of any voltage V, we have for the formation number F in terms of the reading of the output meter

$$F = A\,E\,Q.$$

In order to find the formation number F applying to any sample we must determine the value of Q by use of the formation tester and multiply that quantity by the value of the d.c. balancing voltage E and by the amplification factor A. Both of these quantities may be depended on to remain constant or, at worst, to vary slowly with time. Of the two, the amplification factor is the less dependable and much the harder to determine. (Since the voltage E is furnished by a radio "C" battery from which no current is drawn except at such times as an attempt is being made to measure the value of E the most serious danger to the constancy of E actually arises from attempts to make determinations of its value.)

Let us see if we can avoid the necessity of determining the value of either A or E. Suppose we make successive determinations of the output meter readings Q′ and Q″ associated with measurements made on samples of formation number F′ and F″. Assuming A and E to remain

constant over the period of time required to make the successive determinations of Q′ and Q″ we will have

$$F''/F' = Q''/Q'.$$

The values of the readings of the output meter will be in the same ratio as the formation numbers of the samples to which they apply. If we know the value of the formation number F′ for one of two samples, we need only to determine the values Q′ and Q″ in order to get all the data necessary for a determination of F″.

Now, the value of A can be readily adjusted by manipulation of the volume control. Suppose that, with measurements in progress on a sample of already known formation number F′, we adjust the volume control until the reading Q′ of the output meter is numerically equal to F′. If then we determine the reading Q″ applying to any other sample of unknown formation number F″ we will have

$$F''/F' = Q''/Q' = Q''/F'$$

from which

$$F'' = Q''.$$

In other words, if we have available any sample for which we know the value of the formation number F, it is easily possible to make the formation tester read directly in formation numbers.

Advantage was taken of this property of the formation test throughout the development of the instrument. After preliminary measurements had shown the range of meter readings to be expected a suitable arbitrary formation number F was assigned to one sample and the formation numbers of all other samples measured in this scale which has been maintained constant since that time.

Method of Making Formation Measurements

The operation of the formation tester is relatively simple. It should not require a great deal of skill or exceptional intelligence on the part of the operator either to make measurements using the instrument or to maintain it in good working order.

The first step in preparing the formation tester for a series of measurements is to turn on the light source and the amplifier, letting them warm up for five minutes. In the meantime the operator can adjust the filament voltage, as indicated by a meter, to its rated value and check the voltage of the "B" batteries to be sure that their age has not yet destroyed their usefulness.

After the preliminary warm-up period has passed, a sample of known formation number is placed in its proper position, the cover of the disc housing closed and the motor started. The control which governs the opening of the diaphragm which, in turn, varies the intensity of the light incident upon the sample is turned until a d.c. balance has been attained.

The system of determining whether or not a d.c. balance has been found is novel and works out rather nicely. As has been said the reading of the plate current meter, at balance, will be the same as if neither the voltage due to the photocurrent nor the d.c. voltage against which it is balanced were present in the circuit. A pushbutton, mounted on the instrument panel, is so connected into the circuit that, when pushed, it has the effect of removing the two voltages in question from the circuit. At balance, then, the meter reading will not change if the pushbutton be depressed. If the balance be imperfect, depressing the button will be accompanied by a kick of the meter needle, the direction of the kick indicating whether the light should be increased or decreased in intensity. Using two hands and one pair of eyes it is easy to vary the light intensity, press the pushbutton and watch the meter needle so that an accurate d.c. balance can be found very quickly. The task can be done (less quickly) when only one hand is used.

After the d.c. balance has been found for the sample of known formation number the volume control is adjusted until the output meter (mounted next to the plate current meter on the panel) gives a reading numerically identical with the known formation number of the sample. Since this operation sometimes requires a little time, it is well to depress the pushbutton again to see that the d.c. balance is still good. It usually will be. If so the motor is stopped, the standard sample removed from the instrument, and an unknown sample put in its place.

After starting the motor the procedure for finding the formation number of the unknown consists simply of finding the d.c. balance, immediately reading the formation number of the sample from the output meter, stopping the motor and removing the sample.

It has been our custom to check back against the standard sample once for every five unknown samples measured. It is not usual that actual readjustments of the volume control have to be made so frequently. The frequent checks on the standard simply obviate any possibility that measurements already made will have to be discarded because drifts in the amplification factor were not noticed and corrected quickly enough to insure the accuracy of all data taken.

Significance of the Formation Number

The chief reason for the development of the formation tester was the desire to substitute an instrumental method of grading the formation of samples for the visual scheme at present employed in formation grading under the Paper Code. It follows that the instrumental results to be useful must be in good agreement with the results obtained visually.

The instrumental and the visual results will be in good agreement if the coefficient resulting from the instrumental measurement is a reasonably accurate measure of the degree of response of an average observer to the observed imperfections in formation. (It must be recognized that the instrument can never be expected to agree with the judgments of all observers in those cases where the judgment as to the goodness or badness of a particular sample is governed by the preference of the individual observer for some particular type of deviation from perfect formation. If too many cases arise in which "taste" rules the decision as to which of two samples is the better formed, instrumental methods of formation grading will inevitably fail.)

The formation number F, defined in the preceding paragraphs, is an average, by the method of root-mean-squares, of a quantity whose instantaneous value is

$$f = \frac{\bar{T}}{(\bar{T} - T)}$$

where $\bar{T}$ is the mean transmission to the light incident upon it of the area explored by the spot of light, and T is the transmission of the spot on which the light is directed at the instant in question.

In visual observation of formation the brightness B of any spot on the sample under observation will be measured by IT, where I is the intensity of the light incident upon the back of the sample and T is the transmission for that light of the spot under observation. The mean brightness $\bar{B}$ of the entire sheet will be given by $I\bar{T}$ when $\bar{T}$ is the transmission averaged over the entire sheet for the light incident upon the back of the sheet.

The degree of difference as visually observed between the mean brightness of the sheet and the brightness of a

particular spot on the sheet will be measured by the fraction

$$\text{Contrast} = \frac{\overline{B} - B}{\overline{B}} = \frac{\overline{IT} - IT}{\overline{IT}}$$

$$= \frac{\overline{T} - T}{\overline{T}}$$

which will be seen to be the reciprocal of the quantity f measured by the instrument at any instant. The formation number F is thus seen to be the root-mean-square average of the contrast which would be observed visually between the mean brightness of the sheet and that of any point on the sheet and should be a proper measure of the average contrast observed visually.

Unfortunately, despite the apparent straightforwardness with which the equivalence between instrumental measurements and visual observation was established, one characteristic of visual observation was neglected. It is almost impossible for the eye to compare the brightness of a particular point on the sheet with the mean brightness of the whole sheet. Rather, the comparison will be an estimate of the difference in brightness between a particular small area and the average brightness of that part of the sheet in the general vicinity of the point under immediate observation. For instance, one would scarcely find any fault in the formation of a sheet which failed of perfect formation only by a gradual change in basis weight from one side of the sheet to the other. It would be almost impossible for the eye to note, much less to estimate, the difference in brightness between points located at opposite extremities of the paper. The instrument, on the other hand, could not fail to note and to include in its measurement just such an effect.

It may be argued that, in the case described above, the instrumental indication that the sample is not well formed is correct and that the visual observation that the formation is perfect is simply one more illustration of the danger inherent in too great a reliance upon human judgment. The fact remains that in every case of formation measurement on samples which change slowly in basis weight from point to point on the sheet, the instrumental results will indicate the sheet to be much more poorly formed than some equally well formed sheet, the basis weight of which does not vary gradually. Meanwhile the visual observer will judge the samples to be equally well formed. Such a lack of correlation between instrumental and visual estimates of the relative perfection of formation of particular (but frequently found) pairs of sheets cannot be tolerated in an instrument designed to replace a system of visual grading which has already been in use for more than a year.

The Electric Wave Filter

The difference between the human eye and the formation tester which has caused so much concern in the past few paragraphs lies in the fact that the eye is unable to make comparisons between the brightness of points which are separated by any great distance. This may be paraphrased into the statement that the "memory" of the eye for brightnesses is poor while that of the instrument is good.

The process of limiting the period of "memory" of the formation tester is relatively simple. The alternating current flowing in the output meter and induced by the variations in transmission of the sheet from point to point around the circle of inspection may be represented by a superposition of currents of a sequence of frequencies, each frequency an integral multiple of the frequency with which the light spot retraces its path over the paper. The amplitudes and the phase relationships existing among the various currents will be such that the sum of the currents will add up, at every instant, to the proper total. That this picture is physically as real as that of a single wave of very complicated form is attested by the fact that the form of the wave may be observed visually by aid of an oscillograph and the amplitudes of the components of each frequency determined by means of a wave form analyzer.

Now, the slowly changing characteristics of the transmission of the sheet will give rise primarily to low frequency components in the alternating current, the rapidly changing components giving rise to a signal, a much greater percentage of which is distributed in the higher frequency range. Accordingly, if we insert between the output of the amplifier and the output meter an electric wave filter designed to stop all low frequency currents and to pass all currents having frequencies higher than some suitably chosen value, we may expect that the "memory" of the electrical system will be impaired so that the instantaneous value of the output voltage will represent the difference between the instantaneous value of the transmission of the sheet and an average of the transmission taken over only a short interval of time, and hence applying only to a small portion of the path of the light spot, immediately preceding the instant of observation. The reading of the output meter will then be proportional to the reciprocal of the root-mean-square average of this modified instantaneous voltage, the root-mean-square average being itself taken over the entire area explored by the light spot.

Since we could not very well predict the minimum value of the frequency which should be allowed to come through to the output meter without attenuation by the electric wave filter (called a "high pass filter"), the choice of filter was made by experiment, that filter being chosen which appeared to give the best correlation between instrumental results and visual grading of the samples tested by each of two visual systems of grading.

The high pass filter finally selected was one eliminating almost completely all frequencies below 200 c.p.s. and transmitting succeeding frequencies more and more readily until above 600 c.p.s. all frequencies are passed quite freely. The choice of filter was not found to be particularly critical provided only that all frequencies below 150 c.p.s. were removed.

Using a high pass filter of the type finally selected the current of lowest frequency which can contribute significantly (as shown by actual measurement of the amplitudes of the transmitted currents of each frequency component excited by formation measurements on samples of paper) will have a frequency of 400 c.p.s. or higher. As calculated from this value of frequency the "memory" of the formation tester is estimated to be only long enough to include transmission changes taking place within the two and one-half inches of path preceding the point of observation.

Correlation Between Instrumental and Visual Formation Grading

The success or failure of the formation tester in the grading of samples of paper for perfection of formation depends, as we have said, upon its ability to make numerical comparisons of the formations of arbitrarily chosen pairs of samples of paper which will not be in disagreement with (or, at worst seldom in serious disagreement with) the results of the necessarily more qualitative comparisons by visual observation. In judging the instru-

ment on the basis of such a requirement one is unfortunately forced to remember that the visual judgments of two differently trained observers very often fail to agree, a third observer often complicating the results of visual judgments still further by the addition of still more disagreements.

Each of the two systems already mentioned for the visual grading of samples of uncoated book papers is a system developed within a particular paper manufacturing organization in an attempt to secure a dependable means of judging the perfection of formation of the papers manufactured by that company. Each system may be supposed to have been so set up that disagreements among the gradings made by different observers trained to use the system have been very largely eliminated. If unjustified bias in favor of particular types of formation appears in the results of gradings made by either system, its presence will, in all probability, be revealed by a comparison of these results with the gradings of the same samples when the other system is used.

In Fig. 2 we have plotted points showing the results obtained by use of one of the two visual systems of formation grading plotted against the results obtained by use of the other of the two systems. The samples to which these results apply were samples of uncoated book paper submitted to the Grading Committee of the Book Paper Manufacturers Association by member mills. Each set of formation measurements was made in the laboratory of the firm responsible for the development of the system used in making the measurements. Such a set of samples, representing almost every type of formation to be found in uncoated book papers manufactured in the United States, should offer the most severe test to which a system of formation grading could be subjected.

It is disappointing that the correlation between the two sets of visual formation gradings is no more definite than it is. The existence of a general trend in the data cannot be questioned. The spread of the points, however, is such as to indicate that the two grading systems give quite

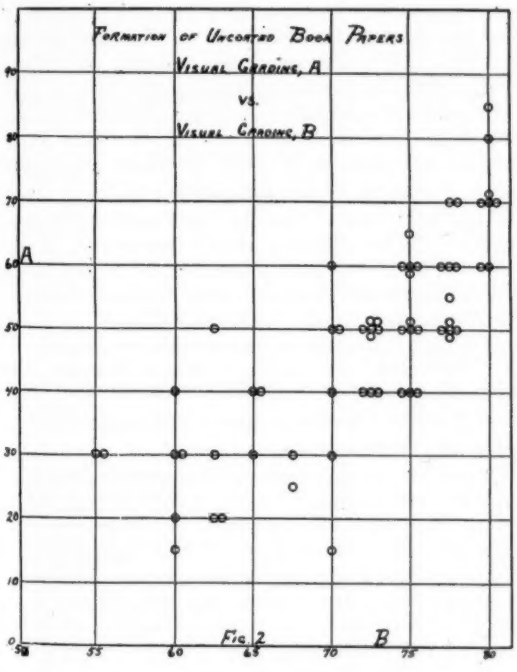

Fig. 2.

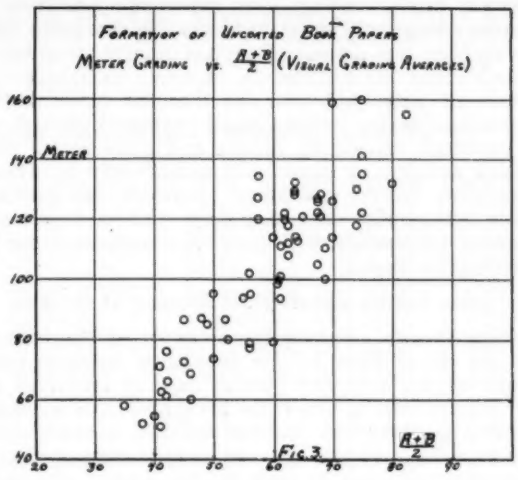

Fig. 3.

different weights to frequently appearing types of imperfect formation.

A third set of samples identical with those used in the two sets of visual gradings was available for use during the development of the formation tester. This was supplemented by still a fourth set of identical samples secured after the results of the visual gradings had been secured and doubt cast on the suitability of the samples. The two sets of samples in our possession were, with the exception of two or three sheets, really identical as judged by formation numbers.

Visual examination of the samples in our possession indicated that an average of the results of the two visual grading systems would be more likely to meet with the approval of an observer unacquainted with either of the two systems than would the results obtained by the use of either system alone. This conclusion has been justified by the fact that the results of instrumental measurement of formation have consistently shown better correlation with the average of the two visual measurements on any sample than with either set of visual results.

Fig. 3 shows the results obtained with the formation tester plotted against the average visual results. Here, as in Fig. 2, the correlation is by no means as good as one could wish. It is, however, about as good as one can expect, the visual data being itself so discordant. On the basis of this agreement we would seem justified in concluding that the instrumental system of formation measurement has as good a chance of making acceptable comparisons of the perfection of formation of uncoated book papers as does either of the two visual systems with which it has been compared.

In the foregoing paragraphs we have assumed that, if the same samples were to be repeatedly tested using either of the visual systems but with the tests performed by a series of different observers, the results would always be the same. We are not perfectly sure that this will be the case, but it is the only assumption which we can permit ourselves to make. In any case we know that the above assumption would be justified for the instrumental measurements.

Precision and Accuracy of the Formation Test

The accuracy of the formation test is, of course, dependent upon the accuracy of standardization of the sample whose formation is regarded as known and which is used in adjustment of the amplification to make the in-

strument direct reading. Our experience has been that samples consistently show no observable change in formation number over periods of several months, provided they be kept clean and unfaded by exposure to light for long periods of time, and provided that the center holes in the samples do not become greatly enlarged through wear on the shaft supporting sample and glass discs. Standardized samples of paper will undoubtedly be available from some central laboratory (provided the instrument comes into general use) until such time as a permanent, cleanable standardizing disc of some material other than paper can be found.

Other Factors Affecting the Accuracy of the Test

Other factors affecting the accuracy of the formation test are the stability of the frequency response characteristic of the amplifier (which may be depended upon over long periods of time), the linearity of the relationship between photoelectric current and the intensity of the light exciting it (this is assured, despite the fact that gas-filled photocells may be used, by the method of measurement of the d.c. component of the photocurrent), the independence of the amplification factor of the amplitude of the currents amplified (which is insured by keeping the output voltage at a level far below the point at which distortion will start) and the constancy of amplification factor and of the d.c. balancing voltage during the time allowed to elapse between checks of the formation tester against the standard sample. Of the latter two, the amplification factor is by far the more subject to variation. A slow drift of the amplification factor is likely to require rechecks on the standard sample every five or ten samples tested, with actual readjustment of the volume control likely to be required somewhat less frequently.

Precision in Repeated Tests

The precision of the formation test is such that in repeat tests of large groups of sample discs after periods of time ranging from a few hours to several months, one finds probable errors of somewhat less than one point in formation number for an individual test. (This applies to samples ranging in arbitrary formation number from 50 to 160.) This figure for the precision of the formation test may be somewhat misleading because of the fact that the spread of formation numbers found among a large number of sample discs cut from paper made in one paper machine run will often be as great as ten points and will occasionally be greater. Our own experience with the formation tester indicates that in formation tests where a high order of accuracy is required not less than five sample discs should be tested.

The foregoing figures as to the precision and accuracy of the instrumental formation test should be amplified by the statement that judging by our own experience and by the comparison of instrumental results with those of the two sets of visual gradings, the least observable difference in perfection of formation corresponds roughly to ten points on the arbitrary formation scale used in all our work.

Reproducibility of Instruments

Our experience in trying to alter the characteristics of the formation tester to make the instrumental results assume a detailed agreement with the results of either one of the two systems of visual grading of formation lead us to the conclusion that it should be very easy, indeed, to build another instrument of similar design which would check accurately with the original. That conclusion has been justified.

The Thwing Instrument Company, Philadelphia, Pa., has been granted the commercial privileges on the formation tester. This company has built an experimental instrument which is a duplicate of our original formation tester except for a few minor alterations (including, among other things, operation of the light source of 60 cycle a.c. instead of the 25 cycle a.c. used by us). Readings taken with the new instrument on a large group of samples duplicated almost perfectly the formation numbers which we had found for the same samples some months previously.

Formation Tests on Papers Other Than Book

It will doubtless have been noted that throughout the discussion of the formation tester and of the results of tests made using the instrument only uncoated book papers have been mentioned. This must not be taken to imply that other grades of paper have never been considered or subjected to test. Many samples of other grades of paper have been tested at one time or another.

Conclusion Affirmed by Experienced Judges

As nearly as we can judge, and this conclusion has been affirmed by observers experienced in judging papers of the type under discussion, the results of formation tests, on those types of papers other than uncoated book which have been tested, are in satisfactory agreement with the conclusions from visual comparisons of the samples tested. We have found, however, that a group of samples composed of several different types of paper cannot be graded satisfactorily, in the judgment of any one observer, by the use of the formation tester. This statement should be qualified by the remark that most experienced observers will vigorously object to being forced to arrange, in order of excellence of formation, a group of samples containing a wide variety of types of formation. On being forced to perform the grading one can usually tell, from the arrangement arrived at, with what types of paper the individual has had experience.

Conclusion

An instrument which measures the perfection of formation of any sample of paper in terms of a single coefficient called the "formation number" of the sample has been described. This instrument is designed to measure all formation numbers on an arbitrarily chosen scale. Enough of the theory of operation of the instrument has been given to make fairly obvious the steps which would have to be taken to determine in absolute units the photometric coefficient measured by the instrument.

It has been shown that the formation number of any sample should be a fairly accurate measure of the reaction of the observer to those properties of a sheet of paper which are observed when the "look through" of the sample is examined and which would be expected to govern the decision that that sheet of paper is more perfectly formed than some other. It was pointed out, however, that any predisposition of the observer in favor of or against particular types of formation cannot well be duplicated in an instrumental measurement.

Comparison of the results of instrumental with two sets of systematically obtained (and numerically stated) visual gradings showed the instrumental gradings to be in better agreement with the average of the two sets of visual gradings, than was the agreement between the visual gradings themselves. From this it was concluded that, on the basis of performance, the chance of success of grading of formation using the instrument described is fully as good as that of either of the two visual systems.

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In order to facilitate reference to the individual numbers of the PAPER TRADE JOURNAL, the following table is given, showing the pages of the *Technical Section* appearing in each of the 26 numbers of Volume 100 (January to June, 1935).

No. 1	Jan. 3	1-12	No. 14	April 4	173-184
No. 2	Jan. 10	13-24	No. 15	April 11	185-196
No. 3	Jan. 17	25-36	No. 16	April 18	197-208
No. 4	Jan. 24	37-42	No. 17	April 25	209-222
No. 5	Jan. 31	43-54	No. 18	May 2	223-234
No. 6	Feb. 7	55-66	No. 19	May 9	235-250
No. 7	Feb. 14	67-78	No. 20	May 16	251-264
No. 8	Feb. 21	79-118	No. 21	May 23	265-270
No. 9	Feb. 28	119-124	No. 22	May 30	271-284
No. 10	Mar. 7	125-134	No. 23	June 6	285-294
No. 11	Mar. 14	135-146	No. 24	June 13	295-316
No. 12	Mar. 21	147-158	No. 25	June 20	317-328
No. 13	Mar. 28	159-172	No. 26	June 27	329-340

A

"A" stain 204
Abietic acid, properties 158
Absorbency tester 67
Absorbent tissues, water absorbency tester 67
Adhesives A77, P76, P77
Air, removal from driers A265
Air heaters 87
Air permeability of paper A119
Alkaline processes A9, P9
  Heat consumption 181
  Heat losses 182
Alum
  Paper brightness, effect on 107
  Tests used for 250
Alumina, absorption of dyes by A76
Aluminum, basic salts of 120
Aluminum sulphate, effect on kaolin retention A77
Ammonia, use in bleaching A75
Ammonia size 145
Ammonium resinate, sizing with P76
ANDERSON, OSCAR E. Analyzing sulphite mill problems 282
ANNIS, HAROLD M. Testing and classification of coated papers 133
Apron P285
Asbestos roofing 339
Ash gate, water collecting 83
Ash handling 79, 83
Asphalt emulsions 221
Asphalts 220
ATKINSON, KERR. Practical limits for steam pressure and temperature in paper mill power plant service 127
Aylesford laboratory beater A12

B

Baffles, role in sheet formation 34
Barium sulphate-titanium dioxide composite, sizing with 2
Bark burner 83
Barkers P125, A126, P126
  Knife type A126
  Swedish A126
Barking losses A126
Basis weight
  Contrast ratio, relation of 153
  Optical properties, relation of 151
BATCHELOR, T. G. *See* Montgomery, A. E.
BEARCE, GEORGE D. Influence of the head box and slice on sheet formation.. 30
Bearings
  Anti-friction A126
  Phenolic composition A126
Beater
  Capacity 327
  Consistency control 173
  Defects 326
  Jordan, comparison of 319
  Laboratory A12, 26
  Multiple roll P12
  Power requirements 326
  Scientific control A12
  Stock maker 26
  Thorsen 320
  Water volume control 173
Beater control, Toledo method 287
Beater roll, clearance recorder 287
Beater sizing 200
Beating A12, P12
  Analysis 49
  Consistency, effect of 141
  Control 45, 287
  Dissolved gases, effect of 195
  Fibers, effect on 71
  Fibrillation theory A12
  Gases, effect of, on 43
  Hydraulic 322
  Kollergang for pulp evaluation 136
  Laboratory control 323
  Measure of 46
  Mechanics 48
  Paper for offset lithography, effect on 330
  Rod mill in 76
  Temperature, effect of 142, 189
  Uniform 46
Bekk smoothness and porosity tester A119
Bell-Irving slice 31
Bennett size making process 219
Beno-wax 220
BERGER, O. L. Heat requirements for sulphite pulping 66
BERGES, E. H. Importance of the calender stack in paper manufacture 295
BIRD, A. C. Operating practice in switching and power distribution in pulp and paper mills 35
BIRREN, FABER. Designing the "perfect" line of colored stock 263
Bitumens A77
Black liquor
  Analysis 226
  Chemical recovery 298
  Evaporation 298
  Evaporators 16
  Fuel value 302
  Heat recovery 298
  Kraft process, sulphite content 226
  Recovery system, heat exchanger for P9
  Sulphide content 226
    Changes in 227
  Wood, digesting straw and grasses with A9
Bleach demand of pulps A78
Bleaching A12, P12, A75, P75
  Ammonia, activation by A75
  Gilg silo A75
  High consistency P75
  Radiation in A12
  Review, 1933 ..... A75
  Rod mill in 178
  Viscosity, effect of A75
Board
  Impregnated A286
  Molding A286
  Waxed A286
Boiler control systems 83
Boiler horsepower indicator 92
Boiler meters 83, 89
Boilers
  B and W integral-furnace 84
  Drum construction 280
  High pressure 279
    Accessories 281
  Smoot regulator 84
  Steam 84
Bond batch refiner 327
Bond paper, opacity 7
Bond paper mill, brightness studies 115
Book mill, brightness studies 110
Book paper, opacity 7
BOOTH, L.M. Paper machine water 37
BORNSTEIN, BERNARD. European ground wood mill practice 123
Brass, physical properties 40
BRAWN, W. E. Comments on ground wood mill practice in America 198
Breast roll, role in stock formation 34
Brightness 333
Brightness tester 335
Broke, rod mill for treatment of 178
BROWN, HUGH E. Requirements of materials for weaving fourdrinier wires.. 39
BROWNING, B. L., and KRESS, OTTO. Study of some factors influencing the formation and dissociation of sulphur trioxide in sulphur burner gases for sulphite pulping 237
Bureau of Chemistry and Soils, pulp and paper research 251
Bureau of Dairy Industry, casein research 251
Burner gases, dewpoint 248

C

"C" stain 204
Calcium carbonate, use as filler A77
Calcium chloride, effect on wood pulping .. A9
Calcium hypochlorite, bleaching with P75
Calcium oxysulphide, use in pulping A9
Calcium sulphate
  Filler, use as A77
  Titanium dioxide composite, sizing with 2
Calender rolls
  Corrosion 297
  Iron A285
  Manufacture 295
  Marking, cause of 297
Calender stack
  Importance 295
  Lubrication A265
CALKINS, JOHN B. Certified stains for fiber differentiation 25
CAMPBELL, W. BOYD. Structure of fiber and its influence in the making of paper 69
Cape slice 30
Capillaries, flow in 200
Carbon dioxide, formation in sulphite process A10
Carbon tetrachloride, digestion of wood, use in A11
Casein A77
  Tests used 250
Cataldi-Pomilio process, continuous P9
Caustic soda
  Size, use in 144
  Tests used 250
Cellulose
  Alkaline number A77
  Copper number A78
    Light, effect of A78
  Determination A78
  Dissolved gases, effect of 196
  Dyes, absorption of A76
  Iodine number A78
  Mercerization P77
  Pulverized P11
  Viscosity, effect of bleaching on A75
  Water absorption, effect of gases 44
Centrifugal flowmeter 91
Centrifugal pumps 89
Chemipulp mills, heat requirements 66
China clay, selection of A77
Chlorine, bleaching with P75
Chlorine process A9
  Continuous P9
Chrome (KA-2) tube, effect on sulphur dioxide oxidation 240
Chromium nickel alloys A126
Cinder eliminator 81

Circuit breakers 99
CLARK, JAMES d'A. Determining the rigidity, stiffness and softness of paper 169
———. Kollergang beating method for pulp evaluation 136
Clay
  Deposits in Ural A77
  Paper brightness, effect on 107
Coal
  Distributor 80
  Handling 79
  Pulverized
    Burners, automatic lighters 82
    Burning 82
    Firing 81
  Pulverizer 81
  Tests used 250
Coated paper
  Classification 134
  Cracking 314
  Specifications 134
Coating materials
  Resins, artificial P77
  Soy bean protein P77
Coating papers, testing 133
COBB, R. M. What I do not know about sizing and capillary flow 200
Color
  Analysis A119
  Specifications A119
Colorimeters A119
Columbia University, pulp and paper research 258
Combustion control equipment 84
Committee on Standardization of Biological Stains 25
Consistency control P197
Consistency regulator A12
Contact angles 202
Contrast ratio
  Basis weight, relation to 153
  Reflectivity, relation to 153
Copper number of cellulose A78
CORDES, O. C. The suction press roll—what it is and how it performs 311
Corrosion, black liquor evaporators 19
Corrugated board, slotting and scoring .. P265
Couch grass 340
Couch rolls, tissue machines 310
Crepe paper, drying P197
Cutter P285
Cylinder machines, wet end, electric drive 183

D

"D" stain 204
Dandy roll P197
  Sheet formation, role in 34
DE CEW, JUDSON A. Adverse function of gases in the manufacture of paper.. 43, 195
Defiberer, laboratory A12
Defibering, definition 277
Deinking, rod mill in 177
Delthirma sizing process 1
Department of Agriculture, pulp and paper research 251
Dewpoint of burner gases 248
Dextrin A77
Dialite brick, effect on sulphur dioxide oxidation 241
Diesel engines 98
Differential gear P265
Digester
  Circulation in P11
  Filler P285
  Relief line P11
  Volume, average 181
Discharge gases, cooling P135
Doctor blades 297
  Monel metal 223
DODGE, W. G., and TARVIN, C. E. Testing of news print for smoothness, ink penetration and opacity 50
Draft and pressure indicator 92
Driers, heat transfer in 20
Drier shell, metal for 22
Drying A265, P265
  Crepe paper P197
  Machine variables, effect of 21
  Problems A197
  Rate, effect of steam pressure 21
  Vertical stack 22
Dubosco colorimeter A119
Duo-de-hydration A197
Dyeing, machine A76
Dyes
  Absorption, effect of hydrogen ion concentration A76
  Eosin A76
  Paper brightness, effect on 116
  Stability A76
  Tests for A76
  Tests used in mills 250

E

"E" stain 204
Economizers 87
Electric drive, cylinder machine wet end 183
Electric generators 99
Electric motors, pulp and paper mills 36
Electric power, pulp mills 35
Electric wiring 36
Electrical controls A126
Electrical equipment A126
Electricity, static, in paper 315
ELLIS, CHARLES L. Downingtown positive adjustable speed controlled to press roll drive 304
Eosin dyes A76
Evaporators
  Black liquor 16
  Corrosion 19
  Forced-circulation 17
  Horizontal-tube 16
  Long-tube film type 17
  Monel metal in 223
  Multiple effect 18
  Submerged-tube vertical type 17

F

"F" stain 204
Fans, vane controlled 82
Fat, determination in pulp A125
Felt life, effect of press roll load recorder 23
Felt regulator A285
Felts, washing 305
Ferric oxide, effect on sulphur dioxide oxidation 242
Ferric sulphate, effect on sulphur dioxide oxidation 242
Ferrous sulphate, effect on sulphur dioxide oxidation 242
Fibers
  Classifier 324
  Stains 203
    Certified 25
  Structure, influence on paper formation 69
  Swelling 201
    Mechanism 71
Fibrillation theory of hydration 69
Fibropump 323
Fibrous Materials Testing Committee report 294
Fillers
  Calcium carbonate A77
  Calcium sulphate A77
  China clay A77
  Kraft pulp, retention by 272
  Titanium pigments A77
  Ural minerals for A77
  Zinc sulphide pigments A77
Flowmeter
  Centrifugal 91
  Electric 92
  Mechanical 91
Folding tester, M. I. T. A78
Forest Products Laboratory, pulp and paper research 252
Fourdrinier wires A135
  Bending stress 56
  Driving tension 56
  Hardness of 59
  Initial tension 56
  Life, factors in 56
  Material for 39
  Microphotographs 62
  Stress analysis 56
  Wear 58
  Weave of 58
Forming board, role in sheet formation .. 34
Foxboro universal meter 91
Freeness tester P78
Furfural number of pulps A78

G

Galvatron 90
Gases
  Beating, effect on 43
  Paper making, role in 195
Gelatin A77
GEORGI, E. A. Our present knowledge of rosin 156
GILBERTSON, LaVERN A. *See* Lewis, Harry F.
Gilg silo (bleaching) A75
Glarimeter
  Ingersoll 334
  Polarization 337
Glass electrodes A119
Gloss 333
  Paper, determination of A78
Glossmeter A119
  Oxford, modified 337
  Photoelectric A78
Glue A77
  Sizing with A75
  Tests used 250
Government Printing Office, pulp and paper research 258
GRAFF, JOHN H. New stains and their use for fiber identification 203
Grasses, digesting with black liquor A9
Grate stoker, Green chain 85
GREEN, ARTHUR B. Admission of stock to fourdrinier wire 229
——— Beating from standpoint of control and design 45
Grinders
  Cold 123
  European types 123
  Great Northern 313
Groundwood. *See* mechanical pulp.
Groundwood-sulphite catalog mill, brightness studies 113
Gurley R. D. smoothness tester A119
Gypsum, Ural deposits A77
Gyro gasifier pulverized fuel burning system 82

H

HAGENAUER, JOHN P. Labor cost of production in the paper and pulp industry 209
Haglund sulphite process A11
HALL, MALCOLM B. Beater water control system 173
HAMM, J. A. Is the beater obsolete? ... 325
Hardimeter 87
HARRISON, WARD D. *See* Kress, Otto
Head box
  Functions 32
  Tissue machines 309
Heat and Power Committee, Sub-Committee on Utilization of Heat in Chemical Processes, report 66
Heat exchanger 86, 95
  Black liquor recovery system P9
Heat production, progress in 79
Heat requirements of pulp mills 66
Heat transfer in driers 20
Herzberg stain 204
Herkules pulpstone 123
Hi-Lo alarm water column 86
Hovalco boiler blow off valves 94
HUNCKLEY, W. T. Recent trends in black liquor evaporator design 16
HUNTER, RICHARD S. Reflection measurement on pulp and paper 333
Hunter glossmeter A119, 335
Hydration 278
  Chemical concepts 69
  Crystalline bond theory 70
  Dissolved gases, effect of 43, 196
Fibrillation theory 69
  Imbibition concept 69
  Paper brightness, effect on 106
Hydraulic power 96
Hydraulic turbines 97
Hydrogen ion concentration
  Absorption of dyes, effect on A76
  Instruments for measurement of A119
  Paper extracts, determination of A119
  Sulphite pulp extracts A119
  White water and finished paper A119
Hydrometer, metal stem 87

I

Imbibition, relation to hydration 69
Ingersoll glarimeter A119, 334
Ink penetration, test of newsprint 50
Insect repellent paper, patents 73
Institute of Paper Chemistry, pulp and paper research 259
Iodine number of cellulose A78
Ionometer A119
Iowa State College, pulp and paper research 260
Iron
  Sulphur dioxide oxidation, effect on 240
  Sulphur trioxide decomposition, effect on 244
Iron oxide, effect on sulphur dioxide oxidation 242

J

Jenk's stain, modified 204
Johns-Manville Company 339
Jordan, comparison with beater 319
Jordan bars, monel metal 223
JUDD, DEANE B. Method for determining the whiteness of paper 266
——— Opacity standards..... 4

K

K monel metal 223
KANTROWITZ, M. S., and SPENCER, E. W. Printers' paper troubles encountered at the Government Printing Office 314
Kaolin
  Dyes, absorption of A76
  Paper, retention by A77
KEHOE, R. D. Beating vs. jordaning in paper making 319
Kollergang
  Laboratory 139
  Pulp evaluation with 136
Kordatzki lyoskop A119
Kraft black liquor, sulphur content 226
Kraft pine, coloring matter in A12
Kraft process
  Calcium carbonate sludge, effect of .. 272
  Clay in cooking liquor, effect of 272
  Sulphur, distribution of, in 225
  White liquor improperly settled 272
Kraft pulp
  Beating 272
  Filler, retention of 272
  Reconditioning 274
  Rod mill as beater for 180
  Stains far 205
KRESS, OTTO, and HARRISON, WARD D. Cooking of kraft pulp with improperly settled white liquor 272

——, and MORGAN, HOWARD M. The modified Oxford glossmeter 337
——, and McINTYRE, JAMES W. The distribution of sulphur during the kraft pulping operation 225
——. *See also* Browning, B. L.; Laughlin, Edwin R.

L

Laboratory beater, Aylesford A12
Laboratory control, relation to production 323
Lactarene A77
La QUER, F. L. *See* Pilling, N. B.
Latex A77
  Patents A76
LAUGHLIN, EDWIN R., and KRESS, OTTO. Study of the factors influencing the brightness of paper as recorded by the General Electric reflection meter . 106
Lautenschlager ionometer A119
LEWIS, HARRY F., and GILBERTSON, LaVERN A. Effect of temperature on the beating of rag stock 189
Lightness (color) 333
Lightning protective equipment 100
Lignin
  Calcium oxysulphide, effect of A9
  Determination of A78
  Sulphite process, reactions in A11
Lime, tests used 250
Limestone, tests used 250
Lubrication
  Calender stack A265
  Steam turbines 169
Lund high pressure inlet 33

M

McGREGOR, GEORGE H. *See* Morden, C. W.
McINTYRE, JAMES W. *See* Kress, Otto.
Management changes in 368
Manifold paper 7
MANNING, W. T. Practical limits in the use of high pressures and temperatures in turbines 1000 K. W. to 10,000 K. W. rating 162
Massachusetts Institute of Technology
  Folding tester A78
  Pulp and paper research 260
Materials of Construction developments .. 293
Mechanical process, European practice ... 123
Mechanical pulp
  Classification 277
  European, quality of 124
  Screening test 277
  Industry 198
  Mills, European practice 123
Medicated paper 73
Metals, spray coating 293
Methylene blue, adsorption of A76
M. I. T. folding tester A78
Miami-Bond pulper A12
Micromax round-chart frequency recorder 94
Micromax pressure recorder 91
MILLER, JAMES D. Materials of Construction development 293
Mills, paints in A126
Mimeograph paper 7
Mineral fillers, tests used 250
MITCHELL, R. W. Soaps, felts and slime 305
Monel metal
  Paper industry, use in A126, 223
  Properties 223
Montan wax 220
  Emulsion P76
MONTGOMERY, A. E., and BATCHELOR, T. G. Delthirna sizing process 1
MORDEN, C. W., and McGREGOR, GEORGE H. The "stock-maker" precision laboratory beater 26
MORGAN, HOWARD M. *See* Kress, Otto.
Mullen breaks, nature of 193
MURDOCK, HAROLD R. Evaluation of heat input into alkaline pulping digester 181
Murray-Waern system of chemical recovery 85

N

National Bureau of Standards, pulp and paper research 257
Naval stores 156
Negretti and Zambra stretch recorder ... A78
NEITZKE, O. F. Principles of Bennett size-making process 219
New York State College of Forestry, pulp and paper research 260
Newsprint
  Ink penetration test 50
  Opacity 7
  Opacity test 50
  Smoothness test 50
  Transparency, test of 52
Newsprint mill, electric power in 35
Nitric acid, digestion of wood by P11
Non-fibrous raw materials, testing 249

O

Offset lithography, register and paper properties 330
Ohio State University, pulp and paper research 261
Oil absorption, paper, test of 65
Oil burner, air register 83
Oil engines 98
Opacity 333
  Basis weight, relation of 151
  Formulas for 4
  Newsprint, test of 50
  Standards of 4
  Titanium pigments, effect of 2
Opacity meter 335
Optical properties, relation of basis weight 151
Oregon State Agricultural College, pulp and paper research 261
ORMSBEE, G. D. J. Toledo beater control 287
Oxford glossmeter, modified 337
Oxido-reduction potential A119

P

Paint A126
PALMROSE, G. V. Mill test for the exact determination of combined sulphur dioxide 28

Paper
  Air permeability, measurement of ... A119
  Artificial resins in P286
  Braille A286
  Brightness 106, 333
  Capillaries, size and shape 203
  Coated, picking test, need of 65
  Coating P286
  Color, determination of A119, 333
  Colored 263
    Psychology of 263
  Contrast ratio, equation for 153
  Corrugating P286
  Crepe A286
  Curl A286, 314
  Currency A286
  Current researches in U. S. 251
  De-sized, after treatment P76
  Drying, factors in 20
  Drying rate, effect of steam pressure 21
  Dyed, stability A76
  Dyeing on machine A76
  Dyes, tests for A76
  Expansion coefficient 332
  Felting properties, effect of gases 44
  Finish and formation tester 291
  Fluffing 316
  Formation, influence of fiber structure 69
  Freeness A78
  Gloss 333
    Determination of A78, A119, 337
  Grease resistance 202
  Hydrogen ion concentration, determination A119
  Impregnated A286
  Ink resistance 202
  Insect repellent, patents on 73
  Machine direction coefficient of expansion 332
  Medicated, patents on 73
  Moisture content, effect of drying ... 21
  Moisture resistance 201
  Moisture sorption 201
  Offset lithography, use in 330
  Oil absorption 64
    Tests for 65
  Oil penetration 64
  Opacity 7, 333
    Titanium pigments, effect on 3
  Optical characteristics, mathematical relationships 151
  Parchment A285
  Photographic A286
  Physical properties, effect of titanium pigments 3
  Plane porosity and printing qualities 291
  Porosity tester A119, 291
  Printing qualities 291
    Evaluation 63
  Printing smoothness, test of 64
  Printing troubles 314
  Reflected light, distribution of 334
  Reflection measurements 333
  Reflectivity 151
  Rewinding A285
  Reworking, deterioration in A12
  Rigidity, determination of 171
  Rigidity factor 171
  Smoothness and printing qualities .. 291
  Smoothness tester A119
  Softness, determination of 171
  Starch, determination of A125
  Static electricity in 315
  Stiffness, determination of 169
  Stretch recorder A78
  Surface texture 333
    Measurement of A119
  Testing A125
  Thickness variations 315
  Transparency meter P78
  Two-sided 315
  Water absorbency tester 67
  Water resistance, method for 159
  Waterproofing P76, P286
  Wavy edges 314
  Waxed A286
  Web breaks 315
  Whiteness, determination of 260
  Wool, determination of A125
  Wrinkling 314
  See also Special names of papers.
Paper industry
  Employment in 209
  Labor costs 209
  Wages in 209
Paper machine hoods, transite 339
Paper making material, couch grass 340
Paper mills
  Electric motors 36
  Electric wiring in 36
  Electrification 100
Paper testing A125
  Developments in 1934 233
Paper Testing Committee
  Annual report 53
  Ink Resistance Sub-Committee, report 63
  Printing Properties Sub-Committee report 63
Paper testing methods, status of 54
Paper towels, water absorbency tester ... 67
Paraffin
  Adhesive A77
  Emulsion, preparation of P76
Parchment paper A285
Patents
  Insect repellent papers 73
  Medicated papers 73
  United States 13, 185
Penetration tester 51
Pentosans, removal from pulp P9
PETERSON, CLIFFORD E. Testing of non-fibrous raw materials 249
PETERSON, G. A. Electric drive for cylinder machine wet end..... 183
Phosphor bronze, physical properties 40
Phosphoric acid, effect on sizing A75
Photoelectric glossmeter A78
Picea excelsa, rosin from A76
PILLING, N. B., LaQUE, F. L., and WHEELER, F. G. Some factors influencing the life of fourdrinier wires . 56
Pine wood, Haglund process for A11
Pitch, removal from sulphite pulp P77
Plioform 294
Pneumatic transportation A126
POLAKOV, WALTER N. Management under changing conditions 268
Polarization glarimeter 337
Pomilio chlorine process A9
Poplar
  Breeding 104
  Hybrids 104
Potentiometer pyrometer 90
Power capacitors 100
Power plants
  Specific designs 129
  Steam and power balance 128
Power production and transmission, advances 79
Press roll
  Differential drive P265
  Load recorder 23
Priest-Martens photometer opacity meter.. 335
Printers, paper difficulties 314
Pulfrich photometer A78
Pulp
  Beater, laboratory 26
  Beater strength, effect of rod mill .. 179
  Bleaching A75, B75
  Brightness 333
  Brown wood A12
  Cellulose number A78
  Chlorination for purification P77
  Chlorine bleach P12
  Color 333
  Consistency control 288
  Consistency regulator A12
  Current researches in United States 251
  Drying, effect of dissolved gases 196
  Evaluation by kollergang 136
  Fat, determination of A125
  Felting properties, effect of gases on 196
  Freeness tester P78
  Freeness-strength relations 178
  Furfural number A78
  Morphological changes on beating .. 193
  Pentosans, removal of P9
  Physical properties, effect of temperature of beating 92
  Purification P9
    Chlorination for P77
  Refiner P77
  Refining action, effect of 276
  Reflection measurements 333
  Rosin, determination of A125
  Stock control P197
  Testing A125
  Viscose P9
  See also Soda, Sulphate and Sulphite.
Pulp grinders 198
Pulp mill
  Acid consumption 66
  Digester pressure 66
  Electric motors for 36
  Electric wiring in 36
  Heat requirements 66
  Switching practice 35
Pulp sheets
  Significance of tests 47
  Uniform P135
Pulper 326
  Miami-Bond A12

Pulpstones 198
  Artificial, European 123
  Sampo 123
Pulpwood
  Hybridization, improvement by 101
  Mechanical pulp 199
  Mensuration in piles A125
  Peeling in bush A125
  Reclaimer P125
Pumps A285
Pyrites, burning A9

R

Rags
  Beating, temperature effects 189
  Chemical constants, effect of beating 194
  Hydration, rate of 191
  Physical constants, effect of beating 192
  Pulp evaluation with kollergang 144
Razek-Mulder color analyzer A119
REESE, S. W., and YOUTZ, M. A. Water absorbency tester using 0.1 cc. of water 67
Refiner P135
  Bond batch 327
  Centrifugal P135
  Miami-bond A12
Refining, definition 277
Reflectivity, relation of contrast ratio 153
Reflectometer, Hunter 335
Republic mechanical flow meter 91
Resins, artificial
  Coating agent P77
  Paper, use in P286
Revertex A77
Rewinder P265
Ridgway's color standards 204
Riley boilers 82
Rod mill 176
  Freeness-strength relation in 178
  Power consumption 176
Rolls
  Grinding A126, 296
  Iron A285
  Mechanism for raising P265
  Perforated, rubber-covered P265
  Ripples in 297
  Rubber A126
Rope halfstuffs, evaluation with kollergang 144
ROSENCRANTS, F. H. Construction problems associated with high pressure boilers for the pulp and paper industry 279
Rosin
  Emulsion, apparatus for A76
  Grades A76
  Oxidation 158
  Properties 156
  Pulp, determination in A125
  Roumanian A76
  Tests used 250
Rosin acids 158
Rosin size A76, 221
  Caustic soda in 144
  Dry 145
  Physical properties 144
  Special types 144
  Stability 146
  Tests used 250
Rosin-wax sizes 221
ROSSMAN, JOSEPH. Insect-repellant and medicated papers (patents) 73
Rotovalves 96
Rubber A77

S

S monel metal 223
Salt cake, tests used 250
Sampo pulpstone 123
Sauerman tower scraper coal storage machine 80
Save all trays, monel metal 223
SCRIBNER, B. W. Developments in paper testing during 1934 233
——. Paper Testing Committee annual report 53
SCHREINER,, ERNST J. Possibilities of improving pulp characteristics of pulpwoods by controlled hybridization of forest trees 101
Screen P135
  Horizontal cylindrical P135
Screen plates, monel metal 223
Semi-coated papers 134
Shake A135, P135
  Sheet formation, role in 34
Sheet formation
  Baffles, role of 34
  Breast roll, role of 34
  Dandy, role of 34
  Elements of 31
  Forming board, role of 34
  Head box, temperature in, and 32
  Principles of 30
  Shake, role of 34
  Stock consistency, role of 32
  Stock velocity, relation of 32
  Uniformity, apparatus for P197
  Water, role of 37
  Wire pitch, role of 34
Silica
  Sulphur dioxide oxidation, effect on .. 240
  Sulphur trioxide decomposition, effect on 244
Silicates, tests used 250
Sisal pulp, stains for 205
Size
  Bennett process 219
  Paper brightness, effect on 107
Sizing A75, A76, P76
  Aluminum hydroxide in P76
  Ammonium resinate in P76
  Beater 200
  Delthirna process 1
  Glue in A75
  Interfacial conditions in 200
  Paraffin emulsion for P76
  Phosphoric acid, role in A75
  Soy bean meal in P76
  Surface 201
    Glue-gelatinized cellulose P76
  Titanium pigments, use of 2
Skip hoist coal handling 79
Slice 229, P265
  Bell-Irving 31
  Cape 30
  Designs 30
  Low-head 230
  Teale 30
  Tissue machines 309
  Van de Carr 31
  Voith 30
Slime removal 307
Slitter P265
Slotting and scoring machine P265
Smoke density recorder 91
Smoothness
  News print, test of 50
  Tester 50
Soaps, felt washing with 305
Soda ash, tests used 250
Soda pulp, purification P77
Sodium aluminate, use in size 145
Sodium monosulphite, wood pulping with P9
Sodium silicate
  Coating composition P76
  Size, use in 145
Sodium sulphide, recovery from black liquors 300
Sodium sulphite, wood pulping with P9
Soy bean meal
  Coating, use for P77
  Sizing agent P76
Speedimax high speed frequency recorder 94
SPENCER, E. W. *See* Kantrowitz, M. S.
Stainless steel A126
Stains 203
  Certified
    Fiber differentiation, use in 25
    List of 25
STAMM, F. C. Factors governing heat transfer through drier shells 20
Starch
  Paper, determination in A125
  Tests used 250
Starch sizing, titanium pigments in 2
Steam accumulators 95
Steam engines 96
Steam generation, advances in 79
Steam pressure limits in power plants 127
Steam pressure reducing station 92
Steam pressure regulators 92
Steam turbines 96, 162
STEELE, F. A. Optical characteristics of paper. I. Mathematical relationships between basis weight, reflectance, contrast ratio and other optical properties 151
Stiffness testers 169
Stock
  Admission to wire 229
  "Initial coating" on wire 33
  Purification on way to machine P197
  Sheet formation, relation to 32
Stock inlet, high pressure 230
Stock mixtures, effect on paper brightness 107
Stock-maker 26
Straw pulp, rod mill as beater and digester 177
Straws, digesting with black liquor A9
Stretch recorder A78
Suction boxes
  Monel metal in 223
  Tissue machine 309
  Wire wear at 58
Suction device P126
Suction felt roll 311
Sulphate pulp, purification P77
Sulphite cooking liquor
  Circulation A11
  Sulphur dioxide, combined, determination 28
Sulphite mills, problems 282
Sulphite process A9-A11, P10-P11
  Acidity, effect of A10
  Blow-off, heat loss in A10
  Carbon dioxide, production of A10
  Chemical mechanism A11
  Chromium-nickel alloys in A126
  Control, lignin determination in A78
  Haglund A11
  Kinetics of A11
  Lignin reactions in A11
  Nitrogen in gases from A10
  Russian practice A10
  Standardization A10
  Sulphur consumption in 284
  Variables in A10
Sulphite pulp
  Bleach demand A78
  Cation exchange in A11
  Chlorine number and yield 283
  Extracts, hydrogen ion concentration. A119
  Factors in production A10
  Pine, removal of resin P77
  Quality, factors in A11
  Stains for 205
  Wood for 282
  Yields 283
Sulphite tower, absorption theory A10
Sulphite waste liquor
  Aeration of A10
  Biochemical oxygen demand A10
  Density A11
  Evaporation P10
  Sulphurous acid, combination with A11
  Ultramarine from A11
  Utilization A11
Sulphonated oil soaps 306
Sulphur
  Black liquor (kraft) process 226
  Kraft process, distribution in 225
  Sulphite process, consumption in 284
  Tests used 250
  Wood pulping, effect on A9
Sulphur burner, spray type, study of 237
Sulphur burner gases, sulphur trioxide in.. 237
Sulphur cements 294
Sulphur dioxide
  Absorption of A10
  Combined, determination of 28
  Oxidation 240
    Catalysts 240
  Recovery A10
  Sulphur trioxide equilibrium 246
  Sulphur trioxide from 240
Sulphur dyes, kraft pulp A12
Sulphur trioxide
  Analysis 239
  Decomposition 243
  Sulphur burner gases, presence in 237
  Sulphur dioxide, formation from 240
Super-Zeo-Dur (water softener) 87
Surface sizing 201
SUTHERLAND, D. MANSON. Effects of refining action 276
Sutermeister stain, modified 204
Switchgear 99

T

Table rolls
  Monel metal 223
  Tissue machines 309
Talc
  Dyes, adsorption of A76
  Ural deposits A77
Tar A77
TARVIN, C. E. *See* Dodge, W. G.
Taylor press roll load recorder 23
Teale slice 30
Tellurium lead 294
Temperature, effect on beating 142, 189
Thermo master regulator 93
THOMAS, ARTHUR W. Solutions of basic salts of aluminum 120
Thorsen beater 320
Tissue machines 309
Titanium dioxide
  Starch sizing, use with 2
  Surface sizing with 2
Titanium pigments
  Fillers, use as A77
  Starch sizing, use with 2
Titanox-A, sizing with 3
Titanox-B, sizing with 2
Titanox-C, sizing with 2
Toledo beater scale 287
Top press roll drive 184, 304
Tornesit 294
Transite 339
Transparency, test of news print 52
Transparency meter P78
Trenel ionometer A119
Triodometer A119
Turbine generators 96
Turbines, steam
  Blades 164
  High pressure 162
  Lubrication 169
  Nozzles for 168
  Valves for 168
Turbovane fans 82

U

Ultramarine, preparation from sulphite waste liquors A11
Ultraviolet lamp A78
Uniform-chromaticity-scale triangle 266
University of Alabama, pulp and paper research 258
University of Idaho, pulp and paper research 258
University of Michigan, pulp and paper research 260
University of Minnesota, pulp and paper research 260
University of Washington, pulp and paper research 261

V

Valve seats 94
Valves 94
Van de Carr slice 30
Van Stone joint 94
Viscose, pulp for P9
Voith slice 31

W

Wages, pulp and paper industry 209
WALKER, GEO. K. Great Northern grinders 313
Walseal fittings 95
WARD, FRANK. Taylor press roll load recorder 23
Warp wire, hardness of 59
Waste paper, pulping A285
Water
  Acidity, effect on sheet formation 37
  Beater volume control 173
  Cellulose, absorption by, effect of gases 44
  Drier, removal from A265
  Paper brightness, effect on 109
  Quality, control of, on machine..... 38
  Sheet formation, role in 37
Water absorbency tester 67
Water drainage, effect of gases..... 44
Water glass A77
Water resistance of paper, method for.... 159
Water softeners 87
  Electrochemical feed 88
  Pressure solution feed 89
  Self regenerating 87
Wax sizes 221
Waxes, tests for 250
WEBER, CHARLES G. Relation of paper properties to register in offset lithography 330
WEHMHOFF, B. L. Evaluation of the printing quality of paper 63
WELLS, SIDNEY D. Paper stock treatment, mixing and beating with rods.... 176
WEST, CLARENCE J. Current research on pulp and paper in the Government and University laboratories of the United States 251
——, United States patents on papermaking 13, 185
WHEELER, F. G. *See* Piling, N. B.
White water
  Hydrogen ion concentration in papermaking A119
  Lime treatment 37
  Reuse of 37
Whiteness of paper
  Determination of 266
  Formula for 267
  Standard of 266
WILCOXSON, L. S. Results from the B and W-Tomlinson process for the recovery of chemicals and heat from kraft black liquor 298
WILLETS, WM. R. Surface application of titanium pigments 2
WILLIAMS, F. M. The relation of smoothness and plane porosity to printing qualities of paper 291
Williams finish and formation tester 291
WILMER, F. P. Heat and power production and transmission 79
Winder, tension control P197
Winding machine, skip hoist 79
Wire
  Pitch of, role in stock formation 34
  Regulator A285
Wood
  Drum barked A10
  Sap peeled A10
  Saturation, effect of acidity of cooking liquor A10
Wood room practice A125
Wool, determination in paper A125
Wulff foil colorimeter A119

Y

Yankee machine, drying on P285
Yarway floatless Hi-Lo alarm water column 86
YOUTZ, M. A. Fibrous Materials Testing Committee progress report, 1934.... 294
See also, Reese, S. W.

Z

Zeolite water softener, automatic 88
Zinc sulphide pigments, use as fillers..... A77

Aetna Paper Co. Holds Up Removal Plans

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 22, 1935—Pending further negotiations by the Chamber of Commerce, the Aetna Paper Company executives have halted their consideration of moving the mills to either Franklin or Urbana, where affiliates are located, it was said early this week.

No definite decision has been reached in the matter, according to Wayne G. Lee, managing director of the Chamber of Commerce at Dayton. "Taking cognizance of the importance of the industrial plant to Dayton, Chamber of Commerce executives have held conferences with company officials requesting that they review all conditions before considering such a move," said Mr. Lee.

"While no decision has been reached by the company, we are confident it may be prevailed upon to remain in Dayton, as the company heads have assured us that they are well pleased with conditions here, but there are many advantages in combined shipping facilities promised by the proposed change."

The Aetna Paper mills are located on Columbia street, Edgemont, and are modern in every particular. Only recently the company was planning to enlarge its boiler room and was preparing to let contracts for the work, besides buying the needed additional equipment. It was estimated that the cost would be approximately $90,000.

Failure to make this change at once, as was intended at first, no doubt was due to consideration given by the company to merge with either the Maxwell Paper Company in Franklin, 17 miles south of Dayton, or the Howard Paper Company at Urbana, located in Champaign county, Ohio.

Government Paper Awards

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 24, 1935—The Government Printing Office has announced the following paper awards.

The Perkins-Goodwin Company will furnish 31,525 pounds (325,000 sheets) of 32 x 48 light weight M.F. book paper at 5.96 cents per pound, bids for which were received on July 12.

The Lanston Monotype Machine Company will furnish 16,700 pounds of monotype keyboard paper at 9.5 cents per pound. Gibson Brothers will furnish 5,500 pounds of 34 x 44 white sterling enamel paper at 7.5 cents per pound.

Union Paper Stock Co. Burned

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 22, 1935—The only three-alarm fire of the year in Dayton occurred at the plant of the Union Paper Stock, Inc., located at State and Fremont streets, in the east central section of the city shortly before 6 P. M. last Tuesday.

The buildings were swept by flames and completely destroyed causing a loss to contents variously estimated from $6,000 to $10,000, with a comparatively small amount of insurance. The buildings were of little consequence but the supplies of paper, rags and other materials, were extensive. An unusually large quantity of paper and rags was being held, Benjamin Dlott, one of the two managers, explained. The other manager, Max H. Rossin, could not state when the plant would be rebuilt, although he said business would proceed as usual, as far as possible under the circumstances.

Officers of the company are Michael Shapiro, president; Robert Shapiro, vice-president; Esther Shapiro, secretary-treasurer, and Messrs. Dlott and Rossin, managers. The company was incorporated eight years ago.

Chaplin Corp. To Build Laboratory

The Chaplin Corporation will soon occupy a new laboratory building being constructed at Portland, Me. Approximately 4,000 square feet of floor space will be provided. A part of this space will be used as a machine shop in which special machinery will be built. The remainder of the space will be used for engineering, drafting and experimental work. Considerable new machinery will be purchased and other equipment will be moved to the new location from Waterville, Me. The approximate cost is $16,000.

Joseph F. Chaplin, of Portland, Me., is president of the company and Merle P. Chaplin of Waterville, is treasurer.

F. W. Oughton Goes with Seymour Paper Co.

Fred W. Oughton on July 1 severed his connection with the sales staff of the Blake-Butler Corporation and is now with Seymour Paper Company in a similar capacity. Mr. Oughton was for some time associated with the advertising staff of the Cowan & Dengler Advertising Agency, prior to his activities in the paper field.

Ladies' Program–A Wow At TAPPI Meeting

On Friday evening, July 12, the energetic and indefatigable Ladies' Committee for the 1935 Fall Meeting of the Technical Association of the Pulp and Paper Industry, met in Collingswood, N. J., at the home of Carl Schmidt, to perfect plans in connection with the ladies' activities for the coming convention in September at Philadelphia and Atlantic City.

Those present included Mrs. H. P. Cannon, Mrs. William R. Maull, Mrs. J. C. Harper, Mrs. E. J. Albert, Mrs. J. Carl Schmidt, Mrs. G. E. Landt, Mrs. William M. Shoemaker and Mr. William M. Shoemaker, chairman of the entertainment committee for the Fall Meeting.

While the men are visiting the mills and plants of interest in the Philadelphia area on Wednesday, September 18, the ladies have arranged to start from the Hotel Pennsylvania, 39th and Chestnut Streets, which will be the headquarters in Philadelphia, for a trip to points of historical interest in Fairmount Park.

Cradle of American History

Arrangements have been made for a bus to take the party from the Hotel Pennsylvania to visit the Letitia Street House, take in the Colonial Mansion of Sweetbriar and Cedar Grove Museum, proceeding to Memorial Hall and splendid Horticultural Hall and arriving at Belmont Mansion, which also dates from Colonial times, where luncheon will be served.

Following lunch, the trip will be continued through the park, visiting Strawberry Mansion, Woodford Museum and Mount Pleasant House (which was purchased by Benedict Arnold for his bride, Peggy Shippen), then to Independence Hall, Christ Church and Betsy Ross House, where the first United States flag was made.

Wanamaker's—One Purchase to a Customer

Following the sight-seeing tour, none of the ladies will want to miss a tour through the magnificent John Wanamaker Store. For the ladies who prefer it, arrangements have been made to make a trip to Wilmington, Del., to see the beautiful Longwood Gardens and points of historical interest at New Castle, Del. Mrs. William M. Shoemaker will be in charge of the ladies' activities in the Wilmington area.

In the afternoon, the party will leave for Atlantic City by train and automobile. For those coming by train and purchasing a ticket to Atlantic City and returning to their homes under the low convention rate, be sure to ask for stop-over privileges in Philadelphia for Wednesday.

Tea will be served to the ladies at the Hotel Ambassador at 5 o'clock.

At 7 o'clock the ladies will join the men at the Ambassador Grill. This will be an entirely informal and get acquainted party with group singing, skits, etc. A Dutch supper will be served and, of course, one of the good Atlantic City orchestras will be on hand.

The committee wants to take time by the forelock and not wait until the last day for the delegates to get acquainted with each other, but rather to get to know each other well the first night in order that the business of the convention can be carried on with the greatest profit and advantage to all.

Lobsters—Rolling Chairs—Mannequins

On Thursday in the forenoon, the ladies will have a bathing party and then meet for lunch at the world famous Hackney's Sea Food Restaurant.

In the afternoon, there will be a choice of a sail boat ride, or "doing the boardwalk in a rolling chair." The ladies will join the men at dinner at the Ambassador Hotel at 7 o'clock in the evening.

On Friday, the ladies will have another bathing party in the morning. In the afternoon, there will be a tour of nearby points of interest on the shore, with the choice of golf, bridge or tennis for those who prefer that form of amusement.

A fashion show is being promoted, but it is understood on reliable authority that the Program Committee has seriously frowned on this idea for fear that this might prove a too alluring competition for the important developments in the various phases of paper making.

At 7 o'clock the ladies will be present at a final banquet of the Convention at the Ambassador Hotel.

Come and Stay a Week

Mrs. Harvey P. Cannon will be glad to have any of the ladies who are contemplating visiting the convention to write her suggesting any particular activities or points of interest they want to see and Mrs. Cannon on her part urges the ladies to see to it that vacation plans are made for the time of the convention, and that reservations for rooms at the Ambassador Hotel are made as soon as possible. Naturally those reserving rooms first will get better value, as while the rates are made especially low for those attending the Tappi Convention, the understanding is that the better rooms will be given those who make their reservations early.

H. E. Baggs, convention manager of the Ambassador Hotel, has arranged to extend the low convention rates for a few days before the convention and a few days after the convention, so that those members who wish to take their vacation at this time may do so at the extremely reasonable hotel rates. Reservations should be made direct to Mr. Baggs.

Finch, Pruyn Wages Not To Change

GLENS FALLS, N. Y., July 22, 1935—Following a conference between officials of Finch, Pruyn & Co. and the International Brotherhood of Papermakers it was announced here this week that the wages and working conditions will remain unchanged during the coming year. The agreement in effect during the past year will be continued. Among the officials of the company at the conference were Maurice Hoopes, president; George K. Walker, general manager; Samuel Pruyn, sales manager, and H. F. Bullard, assistant to the president. Labor officials attending included Matthew J. Burns, president of the International organization; John P. Burke, president of the International Brotherhood of Sulphite Pulp Mill Workers; Henry Greenwood, president of the local union, and representatives of the machinists and electrical unions.

Swedish Newsprint Production

WASHINGTON, D. C., July 24, 1935—Swedish production of newsprint paper during the month of April totalled 20,553 metric tons, a decrease of 3,700 tons compared with the preceding month and of 742 tons compared with April, 1934, according to reports from Acting Commercial Attache Osborn S. Watson, Stockholm. Newsprint exports, from official statistics, totaled 22,246 tons as against 17,429 tons during the corresponding month last year.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JULY 20, 1935

CIGARETTE PAPER

Champagne Paper Corp., Ile de France, Havre, 650 cs.; R. J. Reynolds Tobacco Co., Pr. Harding, Havre, 116 cs.

WALL PAPER

American Express Co., Sanyo, Maru Kobe, 1 cs.; Titan Shipping Co., Carplaka, Gefle, 11 bxs.; W. H. S. Lloyd & Co., American Merchant, London, 2 cs., 1 ble.; ———, Pr. Harding, Havre, 7 cs.

NEWSPRINT

Jay Madden Corp., Pr. Harding, Hamburg, 75 rolls; Jay Madden Corp., Carplaka, Wiborg, 375 rolls; Jay Madden Corp., Scanyork, Kotka, 967 rolls; H. Reeve Angel & Co., Inc., Scanyork, Kotka, 179 rolls; Jay Madden Corp., Svaneholm, Kotka, 324 rolls; Lunham & Reeve, Svaneholm, Viipuri, 93 bls.; Brooklyn Daily Times, Svaneholm, Hallstavik, 322 rolls; Gilman Paper Co., Svaneholm, Hallstavik, 494 rolls; Gilman Paper Co., Markland, Liverpool, N. S., 182 rolls; N. Y. Evening Journal, Markland, Liverpool, N. S., 381 rolls; N. Y. Tribune, Markland, Liverpool, N. S., 1385 rolls; World Telegram, Markland, Liverpool, N. S., 605 rolls; Bridgeport Herald, Markland, Liverpool, N. S., 60 rolls; Brooklyn Daily Eagle, Markland, Liverpool, N. S., 398 rolls; Clinton Paper Corp., Markland, Liverpool, N. S., 28 rolls; Jay Madden Corp., Stuttgart, Bremen, 133 rolls; Perkins Goodwin & Co., Stuttgart, Bremen, 269 rolls; N. Y. Evening Journal, Gisla, Quebec, 5449 rolls.

PRINTING PAPER

E. Dietzgen & Co., Cypria, Marseilles, 10 cs.; L. A. Consmiller, Stuttgart, Bremen, 13 cs.; Jay Madden Corp., Scanyork, Wiborg, 27 rolls; Jay Madden Corp., Scanyork, Kotka, 71 rolls, 57 bls.; G. J. Fijux, Scanyork, Kotka, 88 rolls; Walker Goulard Plehn Co., A. Ballin, Hamburg, 61 cs.

WRAPPING PAPER

Scharf Bros., Statendam, Rotterdam, 6 cs.; National Pulp & Paper Co., Inc., Drottningholm, Gothenburg, 689 rolls; Wilkinson Grey & Co., Drottningholm, Gothenburg, 15 bls.; Walker Goulard Plehn Co., Pr. Harding, Hamburg, 1977 rolls; ———, A. Ballin, Hamburg, 11 cs.

PACKING PAPER

C. Happel, Statendam, Rotterdam, 2 cs.

FILTER PULP

———, Statendam, Rotterdam, 21 pkgs.

FILTER PAPER

H. Reeve Angel & Co., Inc., American Merchant, London, 8 cs.; E. Fougera & Co., Majestic, Southampton, 20 cs.; A. W. Fenton, A. Ballin, Hamburg, 94 bls.; C. Schleicher & Schull Co., Inc., A. Ballin, Hamburg, 17 cs.; P. H. Petry & Co., A. Ballin, Hamburg, 100 bls.

DRAWING PAPER

H. Reeve Angel & Co., Inc., American Merchant, London, 9 cs.; Favor Ruhl & Co., Stuttgart, Bremen, 3 cs.

BASIC PAPER

Globe Shipping Co., Europa, Bremen, 26 cs.

DECALCOMANIAS

Sellers Transportation Co., Europa, Bremen, 5 cs.; D. C. Andrews & Co., Europa, Bremen, 4 cs.; Phoenix Shipping Co., Europa, Bremen, 2 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Laconia, Liverpool, 25 cs. (duplex.)

TRANSFER PICTURES

Rohner Gehrig & Co., Europa, Bremen, 2 cs.

METAL COATED PAPER

K. Pauli Co., Stuttgart, Bremen, 11 cs.; K. Pauli Co., A. Ballin, Hamburg, 34 cs.

SURFACE COATED PAPER

L. A. Consmiller, Stuttgart, Bremen, 5 cs.; Metropolitan Importing & Manfg. Co., A. Ballin, Hamburg, 18 cs.; ———, A. Ballin, Hamburg, 2 cs.

TISSUE PAPER

Jay Madden Corp., Carplaka, Helsingfors, 46 bbls.

CELLOPHANE PAPER

———, Soyo, Maru Osaka, 1 cs.

COLORED PAPER

D. C. Andrews & Co., Stuttgart, Bremen, 1 cs.; J. W. Hampton Jr., Inc., E. Francqui, Antwerp, 3 cs.

GUMMED PAPER

Heemsoth Basse & Co., Stuttgart, Bremen, 7 cs.

STENCIL PAPER

C. Happel, E. Francqui, Antwerp, 1 cs.

CARD BOARD

American Express Co., A. Ballin, Hamburg, 20 cs.

PASTE BOARD

———, Stuttgart, Bremen, 28 bls.

PAPER TUBES

Thomas & Co., A. Ballin, Hamburg, 5 cs.; ———, A. Ballin, Hamburg, 8 cs.

INSULATING BOARDS

———, Carplaka, Wallvik, 365 bdls.

MISCELLANEOUS PAPER

Keller Dorian Paper Co., Pr. Johnson, Marseilles, 3 cs.; ———, Pr. Johnson, Genoa, 4 cs.; Steiner Paper Corp., Pennland, Antwerp, 10 cs.; The Borregaard Co., Inc., Drottningholm, Gothenburg, 45 rolls, 17 bls.; Lunham & Reeve, Drottningholm, Gothenburg, 8 bls.; Wilkinson Grey & Co., Drottningholm, Gothenburg, 11 cs.; E. H. Sergant Co., Drottningholm, Gothenburg, 15 cs.; Almo Trading & Importing Co., Ile de France, Havre, 25 cs.; Coty Processing Co., Ile de France, Havre, 5 cs.; Keuffel & Esser Co.,

Pr. Harding, Hamburg, 26 rolls; Corn Exchange Bank Trust Co., Nagara, Maru Kobe, 5 cs.; Iwai & Co., Nagara, Maru Kobe, 3 cs.; National City Bank, Nagara, Maru Yokohama, 21 cs.; ———, Nagara, Maru Yokohama, 23 cs.; W. Bersch Co., A. Ballin, Hamburg, 2 cs.

RAGS, BAGGINGS, ETC.

Manufacturers Trust Co., Sanyo, Maru Shanghai, 100 bls. cotton waste; Mitsui & Co., Ltd., Sanyo, Maru Shanghai, 131 bls. cotton waste; Atlas Waste Manfg. Co., Statendam, Rotterdam, 10 bls. bagging; Chase National Bank, Cypria, Barcelona, 76 bls. bagging; ———, Cypria, Barcelona, 142 bls. bagging; ———, Soyo, Maru Yokohama, 220 bls. cotton waste; J. J. Ryan & Son, Inc., Soyo, Maru Yokohama, 76 bls. cotton waste; New England Waste Co., Soyo, Maru Yokohama, 200 bls. cotton waste; H. Schimmel, Soyo, Maru Yokohama, 125 bls. cotton waste; Van Oppen & Co., Pennland, Antwerp, 32 bls. rags; Van Oppen & Co., Pennland, Antwerp, 126 bls. bagging; Royal Manfg. Co., American Shipper, Manchester, 50 bls. cotton waste; ———, American Shipper, Manchester, 39 bls. cotton waste; ———, Exermont, Malaga, 104 bls. rags; Continental Bank Trust Co., Exermont, Barcelona, 100 bls. fustians; ———, Exermont, Barcelona, 267 bls. bagging; ———, Exermont, Barcelona, 47 bls. pickers; ———, Exermont, Barcelona, 53 bls. waste; ———, Exermont, Barcelona, 85 bls. rags; ———, Stuttgart, Bremen, 50 bls. rags; ———, Gitano, Newcastle, 56 bls. rags; E. J. Keller Co., Inc., Pan America, ———, 52 bls. rags; Continental Bank Trust Co., Carplaka, Gdynia, 117 bls. linens.

HIDE CUTTINGS

———, Olympia, Barcelona, 440 bags.

OLD ROPE

W. Steck & Co., Statendam, Rotterdam, 82 coils; Banco Coml. Italiane Trust Co., Cypria, Lisbon, 314 rolls; Chemical Bank Trust Co., Gitano, Newcastle, 349 coils.

CHINA CLAY

Whitaker Clark & Daniels, American Shipper, Liverpool, 390 bags.

WOOD PULP

E. J. Keller Co., Inc., Carplaka, ———, 224 bls. wood pulp, 33 tons; Lagerloef Trading Co., Svaneholm, Kotka, 1040 bls. sulphate; Lagerloef Trading Co., Svaneholm, Viipuri, 5165 bls. sulphite; Lagerloef Trading Co., Svaneholm, Viipuri, 3682 bls. sulphate; Castle & Overton, Inc., Svaneholm, Viipuri, 1025 bls. wood pulp; Price & Pierce, Ltd., Svaneholm, Gothenburg, 1500 bls. sulphite; Price & Pierce, Ltd., Svaneholm, Gothenburg, 500 bls. wood pulp; Johaneson Wales & Sparre, Inc., Drottningholm, Gothenburg, 100 bls. sulphate; D. M. Hicks, Inc., Drottningholm, Gothenburg, 210 bls. sulphite; Perkins Goodwin & Co., Drottningholm, Gothenburg, 25 bls. sulphite; ———, Ditmar Koel, Stugsund, 625 bls. sulphite, 125 tons; ———, Ditmar Koel, Stugsund, 875 bls. sulphate, 175 tons; Brown Bros. Harriman & Co., Ditmar Koel, Hernosand, 13 bls. sulphate; Brown Bros. Harriman & Co., Ditmar Koel, Hernosand, 2080 bls. sulphite, 305 tons; ———, Ditmar Koel,Hernosand, 900 bls. sulphate, 150 tons; J. Andersen & Co., Ditmar Koel, Hernosand, 600 bls. sulphite, 100 tons; Johaneson Wales & Sparre, Inc., Ditmar Koel, Sundsvall, 1810 bls. sulphite, 362 tons; Gottesman & Co., Inc., Ditmar Koel, Sundsvall, 1338 bls. mechanical pulp, 223 tons; Bulkley Dunton & Co., Ditmar Koel, ———, 2950 bls. wood pulp, 575 tons; M. Sone, Pr. Harding, Hamburg, 644 bls. wood pulp, 100 tons; Price & Pierce, Ltd., Scanyork, Stockholm, 150 bls. sulphite, 25 tons; M. Sone, Scanyork, Helsingfors, 300 bls. dry pulp, 50 tons; Lagerloef Trading Co., Scanyork, Helsingfors, 160 bls. sulphate, 26 tons; Lagerloef Trading Co., Scanyork, Helsingfors, 1950 bls. sulphite, 327 tons; Lagerloef Trading Co., Scanyork, Wiborg, 5375 bls. sulphite, 1090 tons; E. J. Keller Co., Inc., Scanyork, ———, 448 bls. wood pulp; Lagerloef Trading Co., Scanyork, Kotka, 175 bls. sulphite, 29 tons; Lagerloef Trading Co., Scanyork, Kotka, 100 bls. sulphate, 20 tons; Irving Trust Co., A. Ballin, Hamburg, 150 bls. wood pulp, 25 tons; Castle & Overton, Inc., A. Ballin, Hamburg, 1235 bls. wood pulp, 247 tons; Bulkley Dunton & Co., Black Gull, ———, 330 bls. wood pulp; Bulkley Dunton & Co., Ragnhildsholm, ———, 375 bls. wood pulp.

WOOD PULP BOARDS

H. Fuchs & Son, Drottningholm, Gothenburg, 108 crates; L. E. Oliver, Drottningholm, Gothenburg, 12 bls.; Lagerloef Trading Co., Scanyork, Kotka, 77 bls.; ———, A. Ballin, Hamburg, 10 bls.

NEWARK IMPORTS

WEEK ENDING JULY 20, 1935

Newark Evening News, Donpaco, Donnacona, 501 rolls newsprint.

ALBANY IMPORTS

WEEK ENDING JULY 20, 1935

Lagerloef Trading Co., Svaneholm, Viipuri, 1598 bls. sulphite; Castle & Overton, Inc., Svaneholm, Viipuri, 1774 bls. wood pulp; Perkins Goodwin & Co., Ditmar Koel, Munksund, 6800 bls. sulphate, 1000 tons; ———, Ditmar Koel, Hernosand, 150 bls. sulphate, 25 tons; J. Andersen & Co., Ditmar Koel, Hernosand, 600 bls. sulphite, 100 tons; Bank of N. Y. Trust Co., Ditmar Koel, Hernosand, 6000 bls. sulphate, 1000 tons; Johaneson Wales & Sparre, Inc., Ditmar Koel, Sundsvall, 750 bls. sulphite, 125 tons; Johaneson Wales & Sparre, Inc., Ditmar Koel, Sundsvall, 875 bls. chemical pulp, 175 tons.

BOSTON IMPORTS

WEEK ENDING JULY 20, 1935

Beacon Wiper Supply Co., Soyo, Maru Kobe, 95 bls. rags; G. F. Malcolm, Inc., Laconia, Liverpool, 47 cs. tissue paper; F. S. Webster Co., Inc., Laconia, Liverpool, 1 cs. tissue paper; ———, Ditmar Koel, Stugsund, 1500 bls. sulphite, 300 tons; Bulkley Dunton & Co., Ditmar Koel, ———, 2394 bls. wood pulp; ———, Ditmar Koel, Hernosand, 450 bls. sulphite, 75 tons; Brown Bros. Harriman & Co., Ditmar Koel, Hernosand, 3270 bls. sulphite, 545 tons; Brown Bros. Harriman & Co., Ditmar Koel, Hernosand, 180 bls. sulphate, 30 tons; J. Andersen & Co., Ditmar Koel, Hernosand, 600 bls. sulphite, 100 tons; ———, Ditmar Koel, Hernosand, 300 bls. sulphite, 50 tons; Johaneson Wales & Sparre, Inc., Ditmar Koel, Sundsvall, 250 bls. chemical pulp, 50 tons; Johaneson Wales & Sparre, Inc., Ditmar Koel, Sundsvall, 875 bls. sulphite, 160 tons; Johaneson Wales & Sparre, Inc., Ditmar Koel, Sundsvall, 150 bls. knotter pulp, 25 tons; Perkins Goodwin & Co., Ditmar Koel, Sundsvall, 750 bls. sulphite, 150 tons; Parsons & Whittemore, Inc., Isis, ———, 375 bls. wood pulp; Gottesman & Co., Inc., Hjelmaren, Sweden, 450 bls. wood pulp.

NEW LONDON IMPORTS

WEEK ENDING JULY 20, 1935

Bulkley Dunton & Co., Ditmar Koel, ———, 3000 bls. sulphate, 500 tons.

PHILADELPHIA IMPORTS

WEEK ENDING JULY 20, 1935

Price & Pierce, Ltd., Carplaka, Stockholm, 114 bls. sulphite, 19 tons; 1st Natl. Bank of Phila., Soyo, Maru Kobe, 50 bls. cotton waste; American Cotton Products Co.,

(Continued on page 46)

OUR CLAYS ARE NATURAL, THEREFORE FAST COLOR

NOT ARTIFICIALLY BLUED OR BLEACHED

Superior Quality and Service Obtains Business

ENGLISH ECCO CLAYS **CLAYS**

English China Clays Sales Corporation

551 Fifth Avenue New York City

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY

CANTON. MASS.

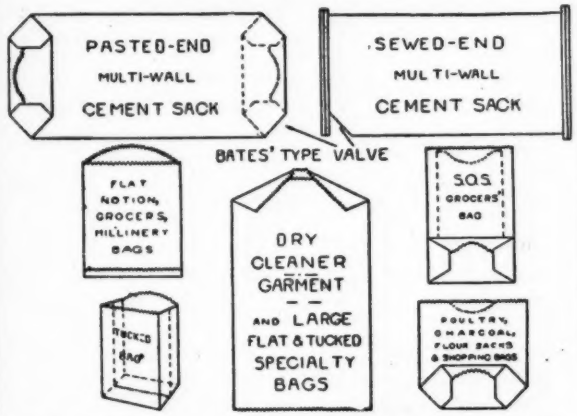
Woolen manufacturers since 1856

POTDEVIN

OVER 60 MODELS OF PAPER BAG

MACHINERY

FOR PLAIN OR PRINTED


PASTED-END MULTI-WALL CEMENT SACK
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FLAT NOTION, GROCERS, MILLINERY BAGS
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POULTRY, CHARCOAL, FLOUR SACKS & SHOPPING BAGS

ALSO MULTI-COLOR PRINTING PRESSES - COMPENSATORS - BOTTOMERS - GLUING - PASTING PAPER WAXING MACHINERY, ETC.

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1223 38th STREET BROOKLYN, N. Y., U. S. A.

J. Andersen & Co.

Selling Agents

21 East 40th Street

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CHEMICAL & MECHANICAL PULP

Kraft Pulp

BERGVIK OCH ALA NYA AKTIEBOLAG
Söderhamn, Sweden
KALIX TRÄINDUSTRI AKTIEBOLAG
Vanaförden, Sweden
MUNKSUNDS AKTIEBOLAG
Munksund, Sweden
NENSJÖ CELLULOSA A.-B.
Sprängsviken, Sweden

Bleached Sulphite

KELLNER-PARTINGTON PAPER PULP CO., LTD.
Sarpsborg, Norway
Edsvalla, Sweden
Hallein & Villach, Austria

Unbleached Sulphite

AKTIESELSKABET GREAKER CELLULOSEFABRIK
Greaker, Norway
BERGVIK OCH ALA NYA AKTIEBOLAG
Söderhamn, Sweden
CELLULOSEFABRIKS A.-G.
Bratislava, Czecho-Slovakia
SVANÖ AKTIEBOLAG
Svanö, Sweden

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, July 24, 1935.

Conditions in the local paper market are considered satisfactory for the time of year. Demand for the various standard grades of paper is fairly brisk, considering the torrid weather. Sales forces of the leading paper organizations are generally optimistic regarding the future. Prices are holding to schedule, in most instances.

Total advertising in newspapers of 52 cities measured by Media Records, Inc., was down 1.4 per cent in June from the level of June, 1934. For the initial half of the year, however, total advertising was up 4.1 per cent, compared with the corresponding period of the preceding year. The newsprint price situation continues unsatisfactory.

The fine paper market is exhibiting a fairly strong undertone. Demand for book, cover, ledger and writing papers is excellent for the season. Prices are holding to schedule. Tissues are going forward in good volume. The coarse paper market is steady, with kraft specialties attracting the most interest. The box board market is quiet.

Mechanical Pulp

Trading in the ground wood pulp market is light. Production in North America and abroad is being maintained in sufficient volume to take care of current requirements and there are no undue accumulations at the pulp mills. While inclined to be easy, prices of mechanical pulp are generally holding to formerly quoted levels.

Chemical Pulp

The chemical pulp market continues steady to firm. Demand for the various domestic and imported grades is well sustained, considering the weather conditions. Offerings of kraft pulp are limited and this grade continues particularly firm. Bleached sulphite pulp, also, is in a strong position.

Old Rope and Bagging

Dullness prevails in the old rope market. Paper mill demand for old manila rope is restricted. Small mixed rope is only moving slowly. Prices remain unchanged. The bagging market is displaying strength. Gunny and scrap bagging are moving freely, while roofing bagging is in seasonal request.

Rags

The domestic rag market is showing signs of improvement. New cotton rags are holding up well. No. 1 white shirt cuttings are firm, with offerings scarce and demand for home consumption and export well sustained. Roofing grades are moving into consumption in good volume. Quotations are firm and slightly higher.

Waste Paper

Board mill demand for the lower grades of paper stock is moderately active. Strictly folded news and No. 1 mixed papers are fairly steady. There is some talk of higher prices in the near future around. The higher grades of waste paper are holding their own, with prices generally holding to schedule.

Twine

Business in the local twine market is fairly buoyant for the time of year, despite the heat wave and the influence of the inventory period. Supplies are moving into consumption in satisfactory volume. Prices remain unaltered and the outlook for the balance of the year is considered promising.

IMPORTS OF PAPER AND PAPER STOCK

(Continued from page 44)

Works, Soyo, Maru Kobe, 40 bls. cotton waste; National Wiping Cloth Co., Soyo, Maru Kobe, 25 bls. cotton waste; O. Daniels, Soyo, Maru Kobe, 25 bls. cotton waste; National City Bank, Exermont, Barcelona, 65 bls. rags; Jay Madden Corp., Scanyork, Helsingfors, 135 rolls wrapping paper; Lagerloef Trading Co., Scanyork, Wiborg, 508 bls. mechanical pulp, 101 tons; J. W. Hampton Jr. Co., Inc., Scanyork, Kotka, 272 rolls newsprint; Gottesman & Co., Inc., Scanyork, Gdynia, 900 bls. wood pulp, 154 tons; Castle & Overton, Inc., Collamer, Havre, 775 bls. rags; ———, Collamer, Havre, 193 bls. rags; Banco Coml. Italiane Trust Co., Collamer, Havre, 100 bls. rags; G. W. Millar & Co., Inc., Collamer, Havre, 230 bls. rags; National Vulcanized Fibre Co., Collamer, Havre, 142 bls. rags; F. Weber & Co., Collamer, Havre, 1 cs. drawing paper; E. J. Keller Co., Inc., Collamer, ———, 463 bls. rags; Bulkley Dunton & Co., Isis, ———, 250 bls. wood pulp; Bulkley Dunton & Co., Britte Marie, ———, 375 bls. wood pulp.

WILMINGTON IMPORTS

WEEK ENDING JULY 20, 1935

Pagel Horton & Co., Inc., Carplaka, Gefle, 5000 bls. sulphite, 508 tons.

BALTIMORE IMPORTS

WEEK ENDING JULY 20, 1935

National City Bank, Cypria, Valencia, 50 bls. rags; Chase National Bank, Cypria, Valencia, 89 bls. rags; Lagerloef Trading Co., Carplaka, Helsingfors, 136 bls. mechanical pulp, 26 tons; Lagerloef Trading Co., Carplaka, Helsingfors, 310 bls. sulphite, 52 tons; Lagerloef Trading Co., Carplaka, Wiborg, 530 bls. sulphite, 106 tons; Lagerloef Trading Co., Carplaka, Wiborg, 362 bls. wood pulp boards, 58 tons; Castle & Overton, Inc., Carplaka, Wiborg, 2808 bls. wood pulp, 561 tons; ———, Carplaka, Gefle, 375 bls. sulphite, 76 tons; Pagel Horton & Co., Inc., Carplaka, Gefle, 750 bls. sulphite, 76 tons; Price & Pierce, Ltd., Carplaka, Hernosand, 1950 bls. sulphite, 325 tons; Price & Pierce, Ltd., Carplaka, Hernosand, 300 bls. sulphate, 50 tons; E. M. Sergeant & Co., Carplaka, Hernosand, 1500 bls. sulphate, 250 tons; Price & Pierce, Ltd., Carplaka, Wallvik, 1800 bls. sulphate, 300 tons; J. J. Ryan & Son, Inc., Soyo Maru, Shanghai, 100 bls. cotton waste; J. J. Ryan & Son, Inc., Montreal, Maru Kobe, 150 bls. cotton waste; Bulkley Dunton & Co., City of Hamburg, ———, 110 bls. wood pulp; Parsons & Whittemore, Inc., City of Baltimore, ———, 150 bls. wood pulp; Gottesman & Co., Inc., Topeka, Sweden, 1000 bls. wood pulp.

WOODEN TANKS

Whether it is stock chests or blow pits, head boxes or acid storage tanks, experience has taught us the best materials to use and the most practical designs. Ask for data on tanks--especially the Patented Elliptical Blow Pit.

THE HAUSER-STANDER TANK CO.
CINCINNATI, O. U.S.A.

S W W Beater Bars

On the left—a standard straight bar for all ordinary beating requirements.

Center—a Dowd staggered bar; a design that will increase circulation, suction and break-up of stock; also reduce friction and lower the risk of burning.

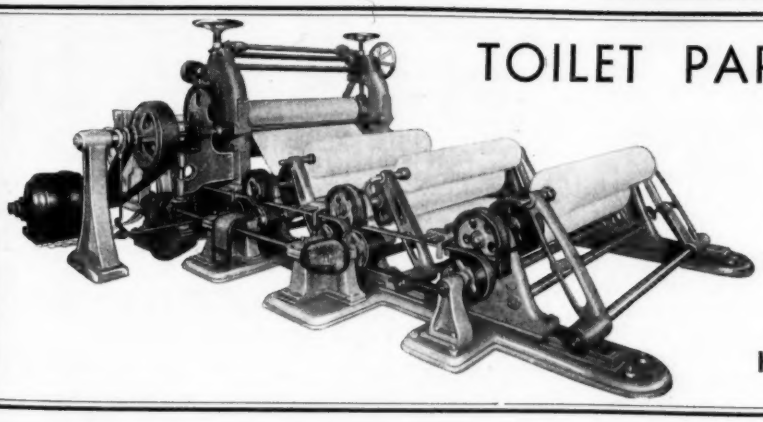
Right—Simonds-Dayton corrugated design; stronger and particularly efficient because of the brushing action of the corrugations.

Also Simonds-Dayton vented type—not shown—and all standard patterns.

And Bed Plates

Complete line—the new abrasive-steel combination bed plate for use on long fiber stock of which kraft, wrapping, envelope and rag are typical. Brushes and draws the fibers.
Also diamond, open center, and all standard patterns.
Paper trimming knives, chipper knives, roll bar grinders, etc.

SIMONDS WORDEN WHITE CO.
OFFICE DAYTON, OHIO
Factories at DAYTON - BUFFALO - CLEVELAND - BELOIT



TOILET PAPER EMBOSSERS

We have just equipped another plant with one of our large multi unit toilet paper embossers.

The technical staff of this industry, after giving this matter special study, appreciate that this machine offers them the best, most economical and most flexible method of producing the very best roll or interfolded toilet papers.

Our engineers are prepared to submit plans and costs for equipment to meet any and every embossing problem that may be met by converters of paper and kindred products.

Hudson Sharp Machine Company
Green Bay, Wisconsin

WINDERS AND REWINDERS

SAMUEL M. LANGSTON COMPANY
CAMDEN, NEW JERSEY

FITCHBURG DUCK MILLS
ESTABLISHED 1844.
414 DUCK MILL ROAD
FITCHBURG, MASS.

CANVAS DRYER FELTS

Fine Faced "English Woven" Felts for Fine Papers, 60 Inches to 288 Inches in Width.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, July 24, 1935.

BLANC FIXE.—The blanc fixe market is only moderately active. Prices are holding to formerly quoted levels. The pulp is quoted at from $42.50 to $45 per ton, in bulk; while the powder is selling at from 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER.—The position of the bleaching powder market is practically unchanged. Contract shipments are moving slowly into consumption. Prices remain unchanged. Bleaching powder is quoted at from $1.90 to $2.15 per 100 pounds, in drums, at works.

CASEIN.—The casein market is quiet. Domestic standard ground is quoted at 10½ and finely ground at 11; Franch standard ground at 12¾ and finely ground at 13¼; Argentine standard ground at 13 and finely ground at 13½ cents a pound, all in bags, car lot quantities.

CAUSTIC SODA.—Demand for caustic soda is fairly active. The contract movement is seasonal. Prices are steady. Solid caustic soda is quoted at from $2.60 to $3.10; while the flake and ground are selling at from $3 to $3.05 per 100 pounds, in drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. The contract movement is well up to average. Imported china clay is still quoted at from $13.50 to $21 per ton, ship side; while domestic paper making clay is selling at from $6.50 to $12 per ton, at mine.

CHLORINE.—The chlorine market is exhibiting a strong undertone. Demand from the paper mills is insistent. Prices are holding to schedule. Chlorine is quoted at from $2 to $2.40 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market is firm. Paper making gum rosin is now quoted at $4.30 and wood rosin at $4.20 per 280 pounds, gross weight, in barrels, at Savannah. Seventy per cent rosin size is selling at $2.50 per 100 pounds, in tank cars, at works.

SALT CAKE.—Supplies of salt cake are moving into consumption in good volume. Salt cake is still quoted at from $12 to $13, and chrome salt cake at from $11 to $12 per ton, at works. Imported salt cake is selling at from $12 to $13 per ton, on dock.

SODA ASH.—The soda ash market is showing signs of improvement. Demand for this chemical is brisk. Prices remain steady and unchanged. Quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bulk, $1.05; in bags, $1.20; and in barrels, $1.50.

STARCH.—Conditions in the starch market are fairly satisfactory, despite the usual misummer lull in demand. Prices are steady. Special paper making starch is quoted at $3.59 per 100 pounds, in bags; and at $3.86 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—The sulphate of alumina market is displaying strength. Prices are holding to schedule. Commercial grades are quoted at from $1.35 to $1.50; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market is steady. Sulphur is quoted at **$18 per long** ton on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—Most of the business transacted in the talc market during the past week was along routine lines. Domestic talc is still quoted at from $16 to $18 per ton at eastern mines; while imported talc is selling at from $23 to $30 per ton, on dock.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@	—
Bonds	6.00	@	—
Index	6.00	@	—
Writings—			
Extra Superfine	6.50	@	—
Superfine	6.25	@	—
Tub sized	5.75	@	—
Engine sized	5.50	@	—
Book, Cased—			
S. & S. C.	5.35	@	5.75
S. & S. C. Litho.	5.60	@	6.00
M. F.	5.10	@	5.50
Coated and Enamel	5.90	@	6.55
Coated Litho	5.90	@	6.55
Tissues—Per Ream—			
White No. 1	.82½	@	.85
White No. 2	.67½	@	—
Anti-Tarnish M. G. only	1.00	@	—
Colored	.85	@	—
Kraft	.70	@	—
Manila	.67½	@	.70
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.00	@	5.25
No. 2 Wood	3.50	@	4.00
Butchers	4.00	@	4.50
Fibre Papers—			
No. 1 Fibre	4.25	@	5.50
No. 2 Fibre	4.00	@	4.75
Common Bogus	1.50	@	3.00
Screenings	2.50	@	3.50
Glassine—			
Bleached	.11	@	—
Unbleached	.09	@	—

(The following Quotations are Delivered New York)

News per ton			
Roll, contract	40.00	@	—
Rolls, spot	40.00	@	—
Sheets	45.00	@	—
Kraft—			
No. 1 Northern	4.12½	@	4.75
Standard	4.00	@	—
Southern	3.87½	@	—
Boards—per ton—			
News	32.50	@	35.00
Chip	30.00	@	32.50
Sgl. Mla. Lt. Chip	45.00	@	47.50
Jute Lined Chip	45.00	@	47.50
White Patent Coated	55.00	@	57.50
Binders Boards	67.00	@	75.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—			
Moist	21.00	@	22.00
Dry	21.00	@	22.00

(F.o.b. Mill)

No. 1 Domestic and Canadian	18.00	@	24.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—			
Division 1	2.60	@	—*
Division 2	2.55	@	—*
Division 3	2.50	@	—*
Prime Qualities—			
Class 1. All Prime Easy Bleaching	2.05	@	—*
Other Than Easy Bleaching—			
Class 2. Higher Than Standard	2.00	@	—*
Class 3, Standard	1.95	@	—*
Class 4. Lower than Standard	1.90	@	—

(On Dock, Atlantic Ports)

Kraft No. 1	1.70	@	1.80
Kraft No. 2	1.50	@	1.60

(F.o.b. Pulp Mill)

Kraft Domestic	1.70	@	2.35

(Delivered)

Soda Bleached	2.50	@	—

*Add 60 Cents per short ton, dock charges, for Albany; $2.00 for Lake Ports East and $3.00 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	5.75	@	6.00
Silesias No. 1	3.75	@	4.00
New Unbleached	6.25	@	6.50
New Soft Blacks	3.00	@	3.25
Blue Overall	3.50	@	3.75
Fancy	2.50	@	2.75
Washables	1.75	@	2.00
Mixed Khaki Cuttings	3.00	@	3.25
O. D. Khaki Cuttings	3.75	@	4.00
Men's Corduroy	1.50	@	1.75
New Mixed Blacks	2.50	@	2.75

Old Rags

White, No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.75	@	3.25
White, No. 2—			
Repacked	1.75	@	2.25
Miscellaneous	1.50	@	1.75
Thirds and Blues—			
Repacked	1.50	@	1.75
Miscellaneous	1.25	@	1.50
Black Stockings	2.50	@	3.00
Roofing Rags—			
No. 1	1.35	@	1.40
No. 2	1.15	@	1.20
No. 3	.95	@	1.00
No. 4	.95	@	1.00
No. 5A	.80	@	.85

Foreign Rags

New Rags

New Dark Cuttings	1.75	@	1.85
New Mixed Cuttings	1.80	@	1.90
New Light Silesias	3.75	@	4.00
Light Flannelettes	3.75	@	4.00
Unbleached Cuttings	6.50	@	6.75
New White Cuttings	6.50	@	6.75
New Light Oxfords	3.25	@	3.50
New Light Prints	2.75	@	3.00

Old Rags

No. 1 White Linens	7.50	@	8.00
No. 2 White Linens	6.50	@	7.00
No. 3 White Linens	4.50	@	5.00
No. 4 White Linens	2.25	@	2.50
No. 1 White Cotton	4.25	@	4.75
No. 2 White Cotton	3.25	@	3.75
No. 3 White Cotton	2.50	@	2.75
No. 4 White Cotton	1.90	@	2.15
Extra Light Prints	2.00	@	2.25
Ord. Light Prints	1.75	@	1.85
Med. Light Prints	1.55	@	1.65
Dutch Blue Cottons	1.75	@	1.85
French Blue Linens	2.30	@	2.40
German Blue Linens	2.15	@	2.25
German Blue Cottons	1.70	@	1.80
Checks and Blues	1.30	@	1.40
Linsey Garments	1.80	@	1.90
Dark Cottons	1.30	@	1.40
Old Shopperies	1.00	@	1.03
New Shopperies	.95	@	1.05
French Blues	1.70	@	1.80

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.60	@	1.70
Domestic	1.45	@	1.55
Wool Tares, light	1.65	@	1.70
Wool Tares, heavy	1.75	@	1.80
Bright Bagging	1.65	@	1.70
Manila Rope—			
Foreign	1.85	@	2.00
Domestic	1.75	@	2.00
Small Mixed Rope	1.10	@	1.35
New Burlap Cut	2.00	@	2.25
Hessian Jute Threads—			
Foreign	2.60	@	4.75
Domestic	2.80	@	3.00

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.45	@	2.55
Ordinary Hard White No. 1	2.10	@	2.15
Hard White No. 2	1.90	@	2.00
Soft White No. 1	1.70	@	1.80
Flat Stock—			
Stitchless	.65	@	.75
Over issue Mag.	.65	@	.75
Solid Flat Book	.45	@	.50
Crumpled No. 1	.35	@	.40
Solid Book Ledger	1.50	@	1.65
Ledger Stock	1.00	@	1.10
New B. B. Chips	.30	@	.35
Manilas—			
New Env. Cut	1.70	@	1.80
New Cuttings	1.35	@	1.45
Print	Nominal		
Bogus Wrapper	.40	@	.50
Container	Nominal		
Old Kraft Machine—			
Compressed bales	1.10	@	1.20
News—			
No. 1 White News	1.20	@	1.30
Strictly Overissue	.60	@	.65
Strictly Folded	.20	@	.25
No. 1 Mixed Paper	.20	@	—

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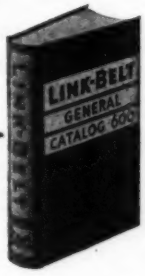

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Twines
(F. o. b. Mill)

Coarse Polished—			
India	.11¼	@	.13¼
Belg. White Hemp	.12¼	@	.15¼
India Compress	.11¼	@	.12¼
Fine Polished—			
Fine India	.19	@	.21
Special	.17	@	.19
B. C.	.25½	@	.27½
Unpolished—			
Box	.10	@	.10½
Paper Makers	.07	@	.12
Tube Rope	.08	@	.13½
Wall Paper	.09	@	.12½
Wrapping	.13	@	.18
Special	.13	@	—
Soft Fiber Rope	.10¼	@	.10¼

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.12	@	.50
Water Marked Sulphite Bond	.06¼	@	.11
Sulphite Bond	.05½	@	.11
Superfine Writing	.18	@	.24
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¼	@	.07¼
No. 2 S.&S.C. Book	.05¼	@	.06½
Coated Book	.07	@	.12
Coated Label	.07	@	.08½
No. 1 Manila	.04¼	@	.05¼
No. 1 Fibre	.04¼	@	.05¼
No. 2 Manila	.04¼	@	.04¼
Butcher's Manila	.03¼	@	.03¼
No. 1 Kraft	4.75	@	5.00
Southern Kraft	3.88	@	4.25
No. 2 Kraft	3.88	@	4.25
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue	.05¼	@	.07
White Tissue	.07	@	.09

(Delivered Central Territory)

News per ton—			
Rolls, contract	41.00	@	—
Sheets, open	46.00	@	48.50
Boards, per ton—			
Plain Chip	46.50	@	—
Solid News	50.00	@	—
Manila Lined Chip	55.00	@	—
Patent coated	65.00	@	—
Container Lined—			
85 Test, per 1000 sq. ft.			1.70
100 Test, per 1000 sq. ft.			1.85

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope cuttings	1.70	@	2.00
No. 1 Hard White	1.40	@	1.65
No. 1 Soft White	1.25	@	1.50
Ledger & Writings	.70	@	.80
Solid Books	.60	@	.70
Blanks	1.00	@	1.05
Krafts	.80	@	.90
New Kraft Cuts	1.20	@	1.30
Manila Env. Cuts	1.25	@	1.50
Ex. No. 1 Manila	90	@	1.00
Print Manila	.40	@	.50
Overissue News	.40	@	.45
Old Newspapers—			
No. 1	.30	@	.35
No. 1 Mixed Paper	.25	@	.30
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(Delivered Philadelphia)

Bonds	.05-9/10	@	.38
Ledgers	.06 9/10	@	.40
Writings—			
Fine No. 3	.05	@	.06
Superfine	.10	@	.18
Extra Fine	.15	@	.20
Fine	.15	@	.24
Fine, No. 2	.10	@	.25
Book, M. F.	.05¼	@	.06¼
Book, S. S. & C.	.05½	@	.07½
Book, Coated	.06½	@	.09
Coated Lithograph	.06¼	@	.08½
Label	.07	@	.11
No. 1 Jute Manila	6.25	@	—
Manila Sul., No. 1	5.25	@	—
Manila No. 2	3.75	@	—
No. 1 Kraft	5.00	@	—
Southern Kraft	4.75	@	—
Common Bogus	.03	@	—
News Print Rolls	40.00	@	—
Straw Board	40.00	@	45.00
News Board	40.00	@	—
Chip Board	37.50	@	—
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	80.00
No. 2, per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.40	@	1.75
Best Tarred, 3-ply	4.00	@	4.45

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.03½	@	.04
New White, No. 2	.02½	@	.04
Light Silesias	.02½	@	.03
Silesias, No. 1	.03	@	.03½
Black Silesias, soft	.02½	@	.03
New Unbleached	.05	@	.05½
Washable, No. 1	01½	@	.02
Blue Overall	.03½	@	.04
Cottons—According to grades—			
Washable, No. 2	.02½	@	.03
New Blue	.01½	@	.03
Fancy	.01½	@	.03
New Black Soft	.02	@	.04
New Light Seconds	.01½	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O.D.	.03	@	.04
No. 2 Mixed	.03	@	.04
Corduroy	.02	@	.03
New Canvas	.03½	@	.04½
New Black Mixed	.02½	@	.03½

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.50
Miscellaneous	1.75	@	2.25
M. G.	3.00	@	3.75
Thirds and Blues—			
Miscellaneous	1.00	@	1.50
Repacked	1.50	@	2.00
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.85

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.50
Domestic	1.50	@	1.75
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.50
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.25	@	2.30
No. 2 Hard White	1.90	@	2.00
No. 1 Soft White	1.80	@	1.85
No. 2 Soft White	1.25	@	1.30
No. 1 Mixed	—	@	.75
Solid Ledger Stock	1.50	@	1.60
Writing Paper	1.00	@	1.10
No. 1 Books, heavy	.55	@	.60
No. 1 New Manila	1.35	@	1.40
Print Manila	.50	@	.60
Container Manila	.45	@	.50
Old Kraft	1.00	@	—
No. 1 Mixed Paper	.23	@	.25½
Straw Board Chip	.20	@	—
Binders Board Chip	.20	@	—
Corrugated Board	.40	@	—
Overissue News	.50	@	—
Old Newspapers	.30	@	—

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	06	@	12½
Rag Content	12	@	30
All Rag	36	@	52½
Bonds—			
Sulphite	.07¼	@	.11
Rag Content	12	@	30
All Rag	36	@	52½
Writings	06½	@	20
Superfines	.11	@	31
Book, Super	.06	@	09
Book, M. F.	05½	@	08½
Book, Coated	.08½	@	18
Coated Litho	.09	@	12
Label	09½	@	15
Jute Manila No. 1	.11	@	13
Manila, Sul. No. 1	.04¾	@	06½
Manila, Sul. No 2	03¾	@	04½
No. 1 Kraft	.04¾	@	.05
No. 2 Kraft	.04½	@	.04¾
(F. o. b. Boston)			
Southern Kraft	.03¾	@	.04½
(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots)			
Common Bogus	.02	@	.02¼
(Delivered New England points)			
News Print Rolls	39.50	@	—
Straw Board, rolls	.009	@	35.00
Straw Board in Sheets, basis 35x to 70x	—	@	40.00
Filled News Board	40.00	@	45.00
Chip Board	37.50	@	40.00
Chip Board (Creasing)	37.50	@	40.00
Single Manila Lined Chip	47.50	@	52.50
Single White, Patent Coated News Board (Bender)	55.00	@	65.00
Wood Pulp Board	70.00	@	75.00
Binder Boards (Standard Grade)	67.00	@	75.00

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.00	@	2.20
No. 1 Soft White	1.75	@	1.90
No. 2 Mixed	.75	@	.80
Solid Ledger Books	1.40	@	1.50
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.85	@	.90
No. 1 Books, heavy	.55	@	.65
No. 1 Books, light	.50	@	.60
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.30	@	1.40
No. 1 Old Manila	.60	@	.65
White Blank News	1.15	@	1.20
No. 1 Kraft	1.00	@	1.05
Mixed Papers	.20	@	.22½
Print Manila	.40	@	.45
Container Manilas	.25	@	—
Overissue News	—	@	.35
Old Newspapers	.25	@	.27½
Box Board Chips	—	@	.25
Corrugated boxes	.32½	@	.37½
Screening Wrappers	.40	@	.45

Bagging
(F. o. b. Boston)

Manila Rope—			
Foreign	1.80	@	1.90
Domestic	1.50	@	1.75
Transmission Rope	.90	@	1.00
Jute Rope	1.50	@	1.60
Jute Carpet Threads	.65	@	.70
Gunny No. 1—			
Foreign	1.85	@	—
Domestic	1.35	@	—
Bleachery Burlap	4.00	@	4.50
Scrap Burlap			
Foreign	1.75	@	1.85
Domestic	1.30	@	1.35
Scrap Sisal	1.05	@	1.15
Scrap Sisal for Shredding	1.20	@	1.35
Wool Tares, heavy	1.50	@	1.60
New Burlap Cuttings	1.60	@	1.75
Australian Wool Pouches	2.50	@	2.75
Heavy Baling Bagging	1.50	@	1.60
Paper Mill Bagging	1.10	@	1.25
Bagging No. 2	.70	@	.75

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.01¾	@	.02
New White No. 1	.05½	@	.06
New White No. 2	.03½	@	.04
Silesias No. 1	.04¼	@	—
New Black Silesias	.02½	@	.03
Soft Unbleached	.05½	@	.06½
Blue Cheviot	—	@	.03
Fancy	.0195	@	.021
Washable	.0165	@	.0170
Cottons—According to grades—			
Blue Overalls	.04	@	—
New Black, soft	04	@	.04½
Khaki Cuttings	.03½	@	.03¾
O. D. Khaki	.03	@	.03¾
Corduroy	.01¾	@	.02
New Canvas	—	@	.03
R.V.D. Cuttings	—	@	.04¾
Paper Mill Bagging	1.10	@	1.25

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	—	@	2.75
Miscellaneous	2.50	@	2.75
White No. 2—			
Repacked	1.90	@	2.00
Miscellaneous	2.00	@	2.25
Twos and Blues	1.25	@	1.50
Thirds and Blues			
Repacked	2.00	@	2.75
Miscellaneous	2.00	@	2.25
Black Stockings	2.50	@	3.00
Roofing Stock			
No. 1	1.20	@	1.25
No. 2	.95	@	1.00
No. 3	.90	@	—

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.35	@	1.45
New White Shirt Cuttings	5.50	@	6.00
Dutch Blues	2.00	@	2.50
New Checks & Blues	2.50	@	3.00
Old Fustians	1.75	@	—
Old Linsey Garments	1.90	@	—

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.11	@	—
No. 2 Sulphite	08½	@	—
No. 1 Colored	.12	@	—
No. 2 Colored	.09	@	—
Ledgers (sulphite)			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.50	@	—
No. 2 M. F. (Carloads)	6.00	@	—
No. 3 M. F. (carloads)	5.00	@	—
No. 1 S. C. (carloads)	7.00	@	—
No. 2 S. C. (carloads)	6.50	@	—
No. 3 S. C. (carloads)	5.20	@	—
No. 1 Coated and Litho	12.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	13.00	@	—
Wrapping—delivered			
Rag Brown	4.75	@	—
White Wrap	3.50	@	—
"B" Manila	5.25	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—
Kraft No. 2	5.40	@	—

(F.O.B. Cars Toronto)

News—			
Rolls (contract)	39.50	@	—
Sheets	42.00	@	—

Pulp
(F. o. b. Mill)

Ground wood	27.00	@	—
Unbleached sulphite	42.00	@	—
Book (Class 1)	58.00	@	—
Writing (Class 2)	59.00	@	—
Select (Class 3)	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env Cut	2.00	@	2.30
Soft White	1.60	@	1.90
White Blk. News	1.25	@	1.40
Books and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	1.00
Light and Crumpled Book Stock	.80	@	.90
Ledgers and Writings	1.00	@	1.05
Manilas—			
New Manila Cut	1.25	@	1.40
Printed Manilas	.50	@	.60
Kraft	1.00	@	1.60
News and Scrap—			
Strictly Overissue	.60	@	—
Strictly Folded	.50	@	—
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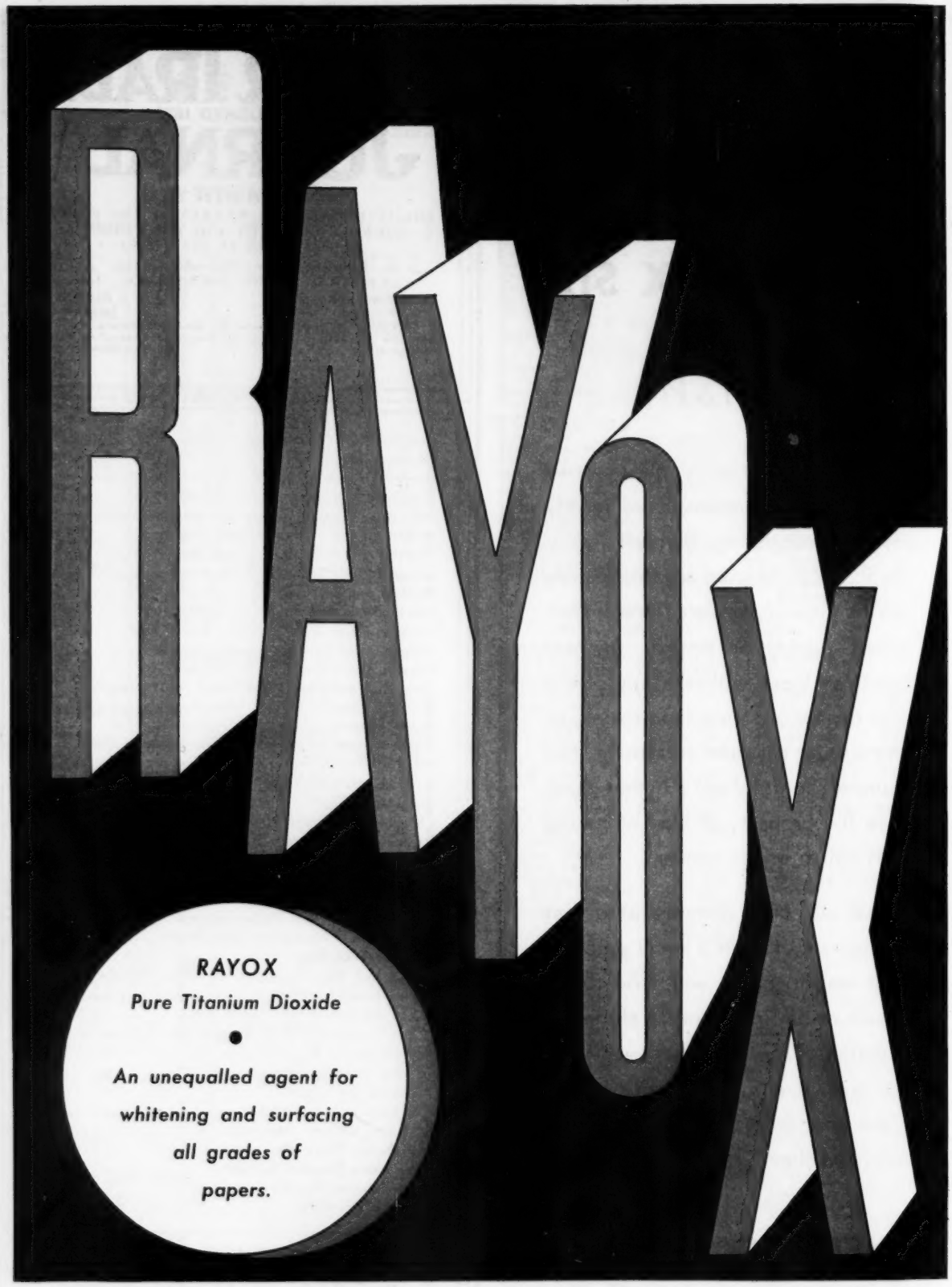
TABLE OF CONTENTS

Program for TAPPI Fall Meeting 13
Crown Willamette Makes Good Report 13
Kimberly-Clark Corp.'s Earnings Increase 14
Whiting-Plover Co. Makes Improvements 15
American Writing Shows Gain 15
Robert Gair Co. Makes Good Report 15
Outlook for Container Corp. Bright 16
Indiana Paper Industry Less Active 17
Beltless Napkin Folder 17
Hindu Finds Old Friend in Camas 17
Canadian Mills Fear Japanese Trade War 18
Alligator Belt Cutter 18
Provide for Change in Directorate 18
New England Fine Mills Fairly Active 19
National Paper Products Improvements 19
Paper Manufacturers and Merchants Confer 20
Glass Makers Open War on Encroaching Paper Bottles 22
E. H. Bartlett 50 Years With Bird & Son 22
Sutherland Paper Co. Pays Extra 22
Cleveland Container Moves to Wilmington 24
Rushmore Paper Mills Build 24
Wood as Raw Material 24
Editorial **23**
Paper Directory of All Nations 23
Weekly Production Ratio Report 29
Accept AAA Newsprint Amendment 29
Technical Section
Pulp and Paper Industry Literature Review ... 31
The Bewoid Sizing System 33
The Mechanism of Dyeing Paper 37
The Dependence of Reflectance and Opacity on Thickness; Relation Between Contract Ratio and Printing Opacity 40
Thwing Instrument Co. Joins TAPPI 41
Construction News 43
St. Regis Reports Improvements 43
Imports of Paper and Paper Stock 45
New York Market Review **47**
Miscellaneous Markets **48**
Market Quotations **48**

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements, 52-53



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